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Proposed Hotel Expansion
110-116 York Street

Transportation Impact Assessment

Proposed Hotel Expansion
110-116 York Street

Transportation Impact Assessment

Prepared By:

NOVATECH
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario
K2M 1P6

December 2024

Novatech File: 112142
Ref: R-2023-169

December 20, 2024

City of Ottawa
Planning, Real Estate, and Economic Development Department
110 Laurier Ave. W., 4th Floor
Ottawa, Ontario K1P 1J1

Attention: **Mr. Wally Dubyk**
Transportation Project Manager, Infrastructure Approvals

Dear Mr. Dubyk:

Reference: **110-116 York Street**
Transportation Impact Assessment
Novatech File No. 112142

We are pleased to submit the following Transportation Impact Assessment (TIA), in support of a Site Plan Control application at 110-116 York Street, for your review and signoff. The structure and format of this report is in accordance with the City of Ottawa's *Revised Transportation Impact Assessment Guidelines* (June 2023).

If you have any questions or comments regarding this report, please feel free to contact Brad Byvelds, or the undersigned.

Yours truly,

NOVATECH

Joshua Audia, P.Eng.
Project Engineer | Transportation

Suite 200, 240 Michael Cowpland Drive, Ottawa ON K2M 1P6 Tel: 613.254.9643 Fax: 613.254.5867 www.novatech-eng.com

TIA Plan Reports

On 14 June 2017, the Council of the City of Ottawa adopted new Transportation Impact Assessment (TIA) Guidelines. In adopting the guidelines, Council established a requirement for those preparing and delivering transportation impact assessments and reports to sign a letter of certification.

Individuals submitting TIA reports will be responsible for all aspects of development-related transportation assessment and reporting, and undertaking such work, in accordance and compliance with the City of Ottawa's Official Plan, the Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines.

By submitting the attached TIA report (and any associated documents) and signing this document, the individual acknowledges that s/he meets the four criteria listed below.

CERTIFICATION

1. I have reviewed and have a sound understanding of the objectives, needs and requirements of the City of Ottawa's Official Plan, Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines;
2. I have a sound knowledge of industry standard practice with respect to the preparation of transportation impact assessment reports, including multi modal level of service review;
3. I have substantial experience (more than 5 years) in undertaking and delivering transportation impact studies (analysis, reporting and geometric design) with strong background knowledge in transportation planning, engineering or traffic operations; and
4. I am either a licensed[1] or registered[2] professional in good standing, whose field of expertise [check √ appropriate field(s)] is either transportation engineering ☑ or transportation planning ☐.

[1,2] License of registration body that oversees the profession is required to have a code of conduct and ethics guidelines that will ensure appropriate conduct and representation for transportation planning and/or transportation engineering works.

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Dated at Ottawa (City) this 20 day of December, 2024 .

Name: Brad Byvelds
(Please Print)

Professional Title: P. Eng. - Project Manager

B. Byvelds

Signature of Individual certifier that s/he meets the above four criteria

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EXECUTIVE SUMMARY

This Transportation Impact Assessment (TIA) has been prepared in support of a Site Plan Control application for the property located at 110-116 York Street. The subject site is approximately 0.57 acres in area, and is currently occupied by a two-storey commercial building and surface parking.

A Community Transportation Study/Transportation Impact Study (CTS/TIS) was prepared in 2013 in support of the 137-141 George Street, 321-325 Dalhousie Street, and 110 York Street property. The development at that time included a 14-storey hotel with 187 rooms, a 22-storey residential condominium with 282 units and approximately 11,800ft^2 of commercial space. The hotel has since been constructed (Andaz Hotel), and the residential building has recently initiated construction.

In 2018, a TIA was prepared in support of a Zoning By-law Amendment application for a 128 room expansion to the Andaz hotel on the 110 York Street site. Since this application was approved, the proponent has purchased the adjacent 116 York Street site and the hotel expansion is being proposed on the two adjoining sites in lieu of the previously proposed expansion on 110 York Street only.

The subject site is surrounded by the following:

- York Street, followed by residential uses to the north,
- Commercial uses and future high-rise residential, followed by George Street to the south,
- Future high-rise residential and existing commercial uses to the east, and
- The existing Andaz hotel, followed by Dalhousie Street to the west.

The proposed development includes a 17-storey expansion of the existing Andaz hotel, which is located at 325 Dalhousie Street (i.e. immediately west of the subject site). The expansion will include 154 additional hotel rooms. A full-movement driveway to George Street has been previously approved as part of the 137-141 George Street, 321-325 Dalhousie Street, and 110 York Street application described above. This driveway will provide access to an underground parking garage that will serve both the existing Andaz hotel and proposed expansion, as well as the proposed 22-storey residential building at 137-141 George Street. The previously approved parking garage will be expanded to the west under the hotel at the 110-116 York Street property as part of this application. Hotel loading/deliveries and a second garage access will be provided via Dalhousie Street, immediately south of the existing Andaz hotel building.

The subject site is located within the 'ByWard Market' special district on Schedule B2 of the City of Ottawa's Official Plan. The implemented zoning for the property is 'Mixed-Use Downtown' (MD2), and the site is not located in any Community Design Plan or Secondary Plan areas. All boundary streets are located within the ByWard Market Public Realm Plan.

The study area for this report includes the boundary roadways Dalhousie Street, York Street, and George Street, and the intersections at Dalhousie Street/York Street and Dalhousie Street/George Street.

The selected time periods for this TIA are the weekday AM and PM peak hours, as they represent the 'worst case' combination of site generated traffic and adjacent street traffic. This TIA considers the buildout year 2026 and five-year horizon 2031.

The conclusions and recommendations of this TIA can be summarized as follows:

Site-Generated Traffic

- The proposed development is estimated to generate 90 person trips (including 14 vehicle trips) during the AM peak hour, and 110 person trips (including 16 vehicle trips) during the PM peak hour.

Access Design

- The primary access to vehicle parking will be provided via a full-movement driveway to George Street, which will be shared with the proposed high-rise at 137-141 George Street. This access has been approved, and the 137-141 George Street development will be constructed prior to the proposed hotel expansion. The proposed development will make use of a proposed loading and second garage access to Dalhousie Street immediately south of the Andaz hotel and subject site.

- The proposed access to Dalhousie Street generally meets the provisions of the *Private Approach By-Law* (PABL), except for Section 25(1)(p). This section identifies a minimum separation requirement of 3m between a private approach and the nearest property line, as measured at the street line. The proposed access will be adjacent to the existing Andaz building, but will be used by the hotel and the proposed expansion. Therefore, it is requested that the requirement be waived. The access will be separated from the southern property line by greater than 3m, meeting the requirement.

Development Design and Parking

- Entrances to the building will connect to the existing sidewalk on York Street, connecting to the pedestrian network throughout the study area and the ByWard Market.

- The hotel zone on Dalhousie Street in front of the existing Andaz Hotel entrance will be maintained. A new curb ramp will be provided to provide improved accessibility within the hotel zone.

- The subject site is within a five-minute (400m) walk of bus stops on Dalhousie Street, Murray Street, Rideau Street, Sussex Drive, and King Edward Avenue, and within a 600m walk of Rideau LRT Station.

- All applicable required Transportation Demand Management (TDM)-supportive design and infrastructure measures in the TDM checklist are met.

- Loading will be internalized and accessed via the proposed driveway to Dalhousie Street. Two loading spaces are proposed adjacent to the south side of the hotel, and adjacent to the north side of the drive aisle leading to the underground parking garage. Loading trucks will drive forward into the Dalhousie Street access, turn around within the site, and drive forward out of the site. Garbage collection is also anticipated to occur within the proposed loading spaces.

- No on-site fire route is proposed as part of the development (i.e. fire trucks responding at the proposed development will be curbside on York Street).

- The proposed parking supply meets the minimum and maximum vehicle parking requirements, minimum bicycle parking requirements, and minimum loading requirements.

Boundary Streets

- The results of the segment MMLOS review can be summarized as follows:
    - No boundary streets meet the target pedestrian level of service (PLOS);
    - All boundary streets meet the target bicycle level of service (BLOS);
    - Dalhousie Street achieves a transit level of service (TLOS) E;
    - Dalhousie Street meets the target truck level of service (TkLOS).

- Dalhousie Street achieves a PLOS B on both sides of the roadway. The target PLOS A is only achievable if the operating speed is reduced to less than 30 km/h.

- York Street achieves a PLOS B on the north side of the roadway and a PLOS A on the south side of the roadway. A minimum sidewalk width of 3.0m is required to achieve the target PLOS A, based on observed peak hour pedestrian volumes. These improvements are likely to be addressed based on the planned modifications for York Street, per the *ByWard Public Realm Plan*.

Transportation Demand Management

- The following TDM measures will be considered by the proponent:
    - Display local area maps with walking/cycling access routes and key destinations at major entrances;
    - Display relevant transit schedules and route maps at entrances;
    - Provide on-site amenities/services to minimize mid-day or mid-commute errands.

The proposed development is recommended from a transportation perspective.

1.0 SCREENING

1.1 Introduction

This Transportation Impact Assessment (TIA) has been prepared in support of a Site Plan Control application for the property located at 110-116 York Street. The subject site is approximately 0.57 acres in area, and is currently occupied by a two-storey commercial building and surface parking.

A Community Transportation Study/Transportation Impact Study (CTS/TIS) was prepared in 2013 in support of the 137-141 George Street, 321-325 Dalhousie Street, and 110 York Street property. The development at that time included a 14-storey hotel with 187 rooms, a 22-storey residential condominium with 282 units and approximately 11,800ft^2 of commercial space. The hotel has since been constructed (Andaz Hotel), and the residential building has recently initiated construction.

In 2018, a TIA was prepared in support of a Zoning By-law Amendment application for a 128 room expansion to the Andaz hotel on the 110 York Street site. Since this application was approved, the proponent has purchased the adjacent 116 York Street site and the hotel expansion is being proposed on the two adjoining sites in lieu of the previously proposed expansion on 110 York Street only.

The subject site is surrounded by the following:

- York Street, followed by residential uses to the north,
- Commercial uses and future high-rise residential, followed by George Street to the south,
- Future high-rise residential and existing commercial uses to the east, and
- The existing Andaz hotel, followed by Dalhousie Street to the west.

An aerial of the vicinity around the subject site is provided in **Figure 1**.

1.2 Proposed Development

The proposed development includes a 17-storey expansion of the existing Andaz hotel, which is located at 325 Dalhousie Street (i.e. immediately west of the subject site). The expansion will include 154 additional hotel rooms. A full-movement driveway to George Street has been previously approved as part of the 137-141 George Street, 321-325 Dalhousie Street, and 110 York Street application described above. This driveway will provide access to an underground parking garage that will serve both the existing Andaz hotel and proposed expansion, as well as the proposed 22-storey residential building at 137-141 George Street. The previously approved parking garage will be expanded to the west under the hotel at the 110-116 York Street property as part of this application. Hotel loading/deliveries and a second garage access will be provided via Dalhousie Street, immediately south of the existing Andaz hotel building.

The subject site is located within the 'ByWard Market' special district on Schedule B2 of the City of Ottawa's Official Plan. The implemented zoning for the property is 'Mixed-Use Downtown' (MD2), and the site is not located in any Community Design Plan or Secondary Plan areas. All boundary streets are located within the ByWard Market Public Realm Plan.

A copy of the preliminary site plan is included in **Appendix A**.

Figure 1: View of the Subject Site

1.3 Screening Form

The City's *2017 TIA Guidelines* identify three triggers for completing a TIA report, including trip generation, location, and safety. The criteria for each trigger are outlined in the City's TIA Screening Form, which is included in **Appendix B**. The trigger results are as follows:

- Trip Generation Trigger – The development is anticipated to generate more than 60 peak hour person trips; further assessment is **required** based on this trigger.

- Location Triggers – The development is located in a Protected Major Transit Station Area and a Design Priority Area; further assessment is **required** based on this trigger.

- Safety Triggers – The access locations are within 150m of the intersections at Dalhousie Street/York Street and Dalhousie Street/George Street; further assessment is **required** based on this trigger.

2.0 SCOPING

2.1 Existing Conditions

2.1.1 Roadways

All roadways within the study area fall under the jurisdiction of the City of Ottawa.

Dalhousie Street is a collector roadway that generally runs on a north-south alignment between Boteler Street and Besserer Street. Within the study area, Dalhousie Street has a two-lane undivided urban cross-section, sidewalks on both sides of the roadway, and a posted speed limit of 30 km/h. South of St. Patrick Street, Dalhousie Street is designated as a truck route, allowing full loads. Street parking is permitted in select areas on both sides of Dalhousie Street, and is restricted to two-hour parking from 8:30am to 5:30pm each day.

York Street is a local roadway that generally runs on an east-west alignment, starting at Sussex Drive and terminating approximately 130m east of Beausoleil Drive, with a discontinuity at King Edward Avenue. Within the study area, York Street has a two-lane urban cross-section that is undivided from Dalhousie Street to the subject site, and divided east of the subject site. Sidewalks are provided on both sides of York Street, and the roadway has a posted speed limit of 30 km/h. York Street is not designated as a truck route. West of Dalhousie Street, perpendicular parking spaces are provided on the north side and parallel parking spaces are provided on the south side. East of Dalhousie Street, parallel parking spaces curbside and angle parking spaces in the centre median are provided. In all cases, parking is restricted to two-hour parking from 8:30am to 5:30pm each day.

George Street is a local roadway that generally runs on an east-west alignment between Sussex Drive and King Edward Avenue. Within the study area, George Street has a two-lane urban undivided cross-section, sidewalks on both sides of the roadway, and a posted speed limit of 30 km/h. Between Dalhousie Street and Cumberland Street, George Street is designated as a truck route, allowing full loads. Street parking is permitted in select areas on George Street, and is restricted to two-hour parking from 8:30am to 5:30pm each day.

The roadway of the greater area surrounding the subject site is illustrated in **Figure 2**.

Figure 2: Roadway Network

2.1.2 Intersections

Dalhousie Street/York Street

- Signalized four-legged intersection
- North/South Approaches (Dalhousie Street): one shared left turn/through/right turn lane
- East/West Approaches (York Street): one shared left turn/through/right turn lane
- Standard crosswalks on all approaches

Dalhousie Street/George Street

- Signalized four-legged intersection
- North Approach (Dalhousie Street): one shared left turn/through lane and one right turn lane
- South Approach (Dalhousie Street): one left turn lane and one shared through/right turn lane
- East Approach (George Street): one shared left turn/through/right turn lane
- West Approaches (George Street): one left turn lane and one shared through/right turn lane
- Zebra-striped crosswalks on all approaches (not shown in aerial)

2.1.3 Driveways

In accordance with the *TIA Guidelines*, a review of the existing adjacent driveways along the boundary roads are provided as follows:

Dalhousie Street, east side

- No driveways

George Street, north side

- One driveway to public parking at 93 George Street
- One egress to a hotel at 350 Dalhousie Street
- One driveway to commercial uses at 171 George Street
- One driveway to residential uses at 179 George Street

Dalhousie Street, west side

- One driveway to a hotel at 350 Dalhousie Street

George Street, south side

- One driveway to residential uses at 90 George Street
- Seven driveways to public parking lots within George Street ROW (between William Street and Cumberland Street)

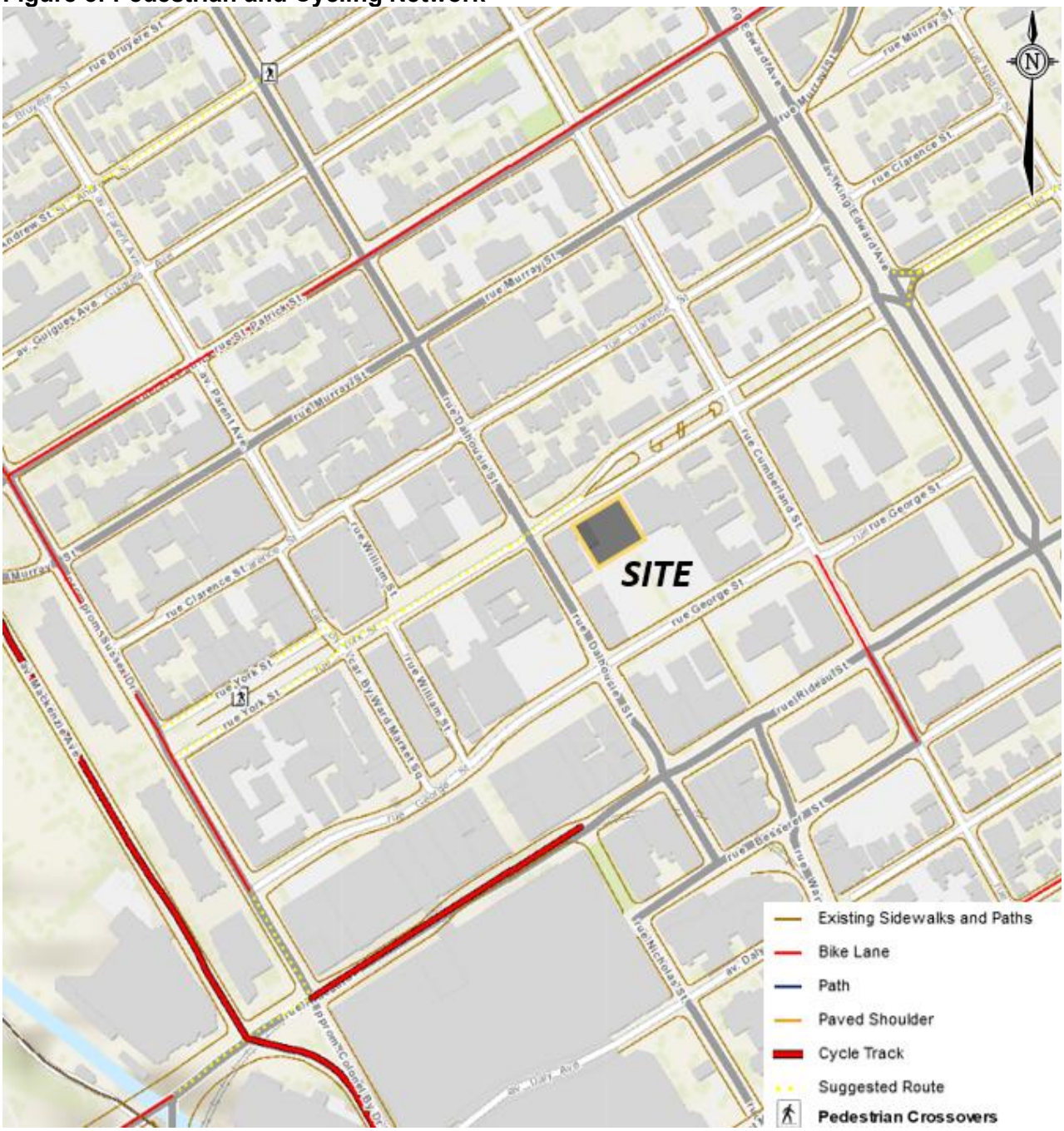
2.1.4 Pedestrian and Cycling Facilities

Sidewalks are provided on both sides of Dalhousie Street, York Street, and George Street. In the greater area, sidewalks are generally provided on both sides of all streets within the ByWard Market. For cyclists, an existing bike lane on the west side of Cumberland Street is provided between George Street and Besserer Street. A new northbound cycle track was recently constructed on the east side of Cumberland Street between Rideau Street and George Street.

In the City of Ottawa's primary cycling network, Dalhousie Street, York Street, and George Street do not have any cycling route designations. Based on the City's *Transportation Master Plan Part 1 (2023)*, the nearest crosstown bikeway routes to the subject site include St. Patrick Street and Murray Street to the north, Cumberland Street to the east, and Sussex Drive to the west.

The existing pedestrian and cycling network of the greater area surrounding the subject site is illustrated in **Figure 3**.

Figure 3: Pedestrian and Cycling Network



2.1.5 Area Traffic Management

Within the study area, there are no Neighbourhood Traffic Calming studies that are in progress.

Area speed limit signs are posted on all study area roadways, indicating that all streets within the ByWard Market have a speed limit of 30 km/h. Centreline flex posts have been installed on Dalhousie Street north of Guigues Avenue (i.e. north of the study area). A bulbout and planter has been installed on the east side of Dalhousie Street immediately north of the existing loading/parking access serving the Andaz hotel, which narrows the roadway and delineates a 15-minute hotel zone between the bulbout and York Street.

2.1.6 Transit

The locations of relevant OC Transpo bus stops in the vicinity of the subject site are described in **Table 1**, and are shown in **Figure 4**. A summary of the various routes which serve the study area is included in **Table 2**. Detailed route information and an excerpt from the OC Transpo System Map are included in **Appendix C**.

Table 1: OC Transpo Transit Stops

Stop		Location	Routes Serviced
#2351		South side of Rideau Street, west of Cumberland Street	7, 12, 14, 15, 18, 616, 624
#3009		O-Train station, located under Rideau Street	1
#3009	A	North side of Rideau Street, west of Dalhousie Street	5, 6, 7, 12, 14, 15, 18, 57, 61, 75, 114, 615, 616
	B	North side of Rideau Street, east of Sussex Drive	5, 6, 7, 12, 14, 15, 18, 39, 45, 97, 602, 616, 624
	C	East side of Colonel By Drive, south of Rideau Street	9
#6837		East side of Dalhousie Street, south of Clarence Street	6, 602
#6838		West side of Dalhousie Street, north of York Street	6, 9, 602
#7576		West side of Dalhousie Street, north of Rideau Street	6, 9, 602
#7596		North side of Rideau Street, west of Waller Street	7, 12, 14, 15, 18, 615, 616, 624
#8001		East side of Sussex Drive, south of Murray Street	9
#8974		East side of King Edward Avenue, south of York Street	56
#8977		West side of King Edward Avenue, south of York Street	56

Figure 4: OC Transpo Bus Stop Locations

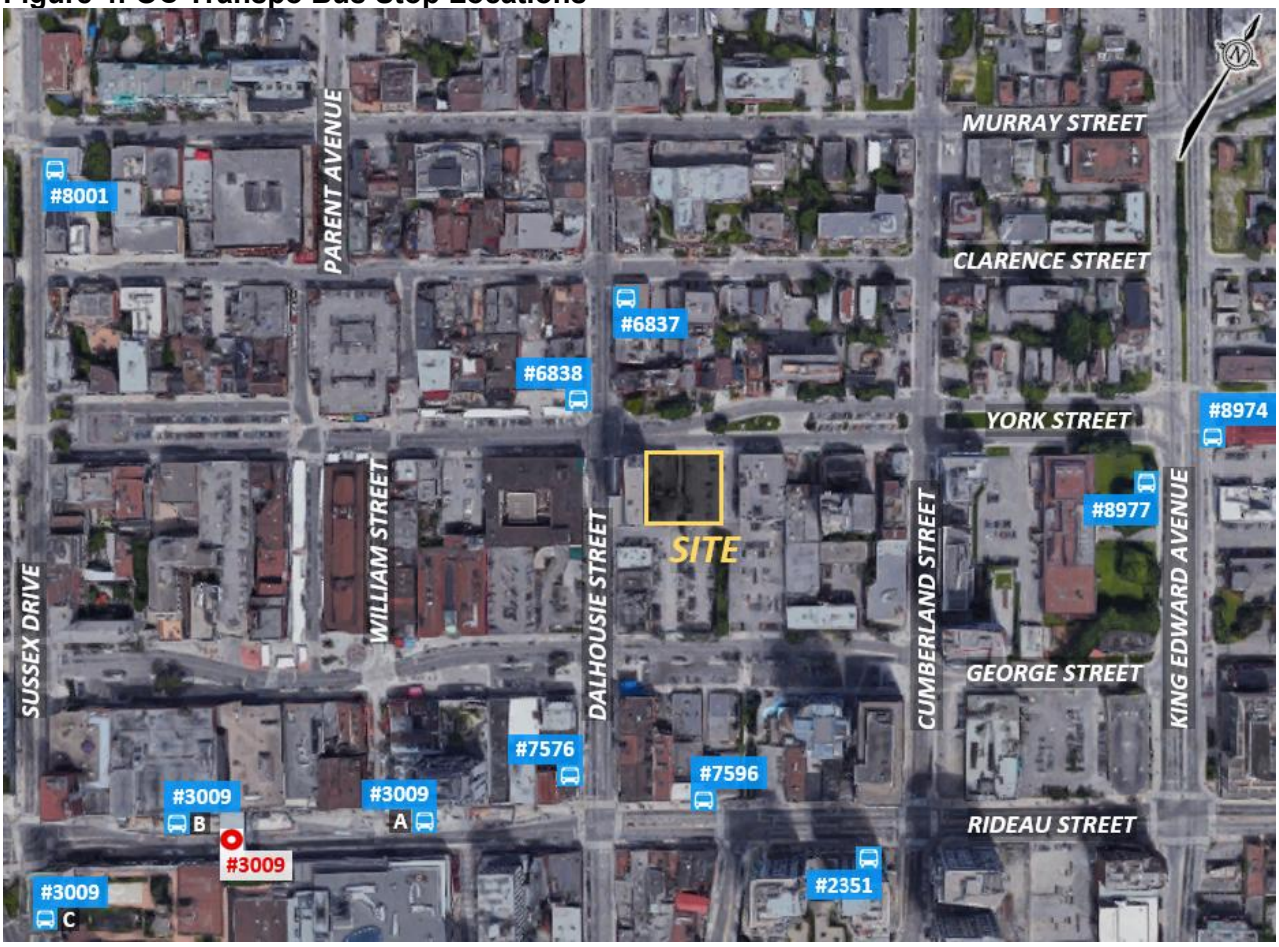


Table 2: OC Transpo Route Information

Route	From ↔ To	Frequency
1	Tunney's Pasture ↔ Blair (O-Train Line 1)	All day LRT service, seven days a week; 5- to 10-minute headways
5	Billings Bridge ↔ Rideau	All day service, seven days a week; 30-minute headways
6	Rockcliffe ↔ Greenboro	All day service, seven days a week; 15- to 30-minute headways
7	Carleton ↔ St. Laurent	All day service, seven days a week; 8- to 30-minute headways
9	Rideau ↔ Hurdman	All day service, seven days a week; 15- to 30-minute headways
12	Parliament ↔ Blair	All day service, seven days a week; 15- to 30-minute headways
14	St. Laurent ↔ Tunney's Pasture	All day service, seven days a week; 15- to 30-minute headways
15	Gatineau ↔ Blair	Peak period service, Monday to Friday; 15-minute headways
18	St. Laurent ↔ Parliament	All day service, seven days a week; 30-minute headways
56	Civic / King Edward ↔ Tunney's Pasture	12-hour service, seven days a week; 15- to 60-minute headways

Route	From ↔ To	Frequency
39	Millennium ↔ Blair / La Cité	Only serves Rideau Station overnight, as these routes operate as an extension of O-Train Line 1 when the LRT is not running
45	Hospital ↔ Hurdman	
57	Bayshore / Crystal Bay ↔ Tunney's Pasture	
61	Terry Fox / Stittsville ↔ Tunney's Pasture / Gatineau	
75	Cambrian / Barrhaven Centre ↔ Tunney's Pasture / Gatineau	
97	Airport ↔ Hurdman	
114	Carlington ↔ Rideau	Select times only, Monday to Friday
602	Mackenzie King ↔ De La Salle H.S.	Service at select times on school days only
615	Parliament ↔ Lester B. Pearson H.S.	
616	Parliament ↔ Gloucester H.S.	
624	Rideau ↔ Gloucester H.S.	

Existing transit priority measures are implemented along Rideau Street, in the form of shared transit/ bike lanes in both directions. Additionally, the parking lane along southbound King Edward Avenue (from Bruyère Street to George Street) operates as a shared transit/bike lane during the PM peak period (3:30pm to 5:30pm on weekdays).

2.1.7 Existing Traffic Volumes

Weekday traffic counts completed by the City of Ottawa were used to determine the existing pedestrian, cyclist, and vehicular traffic volumes at the study area intersections. These counts were completed on the dates listed below:

- Dalhousie Street/York Street August 23, 2022
- Dalhousie Street/George Street March 21, 2019

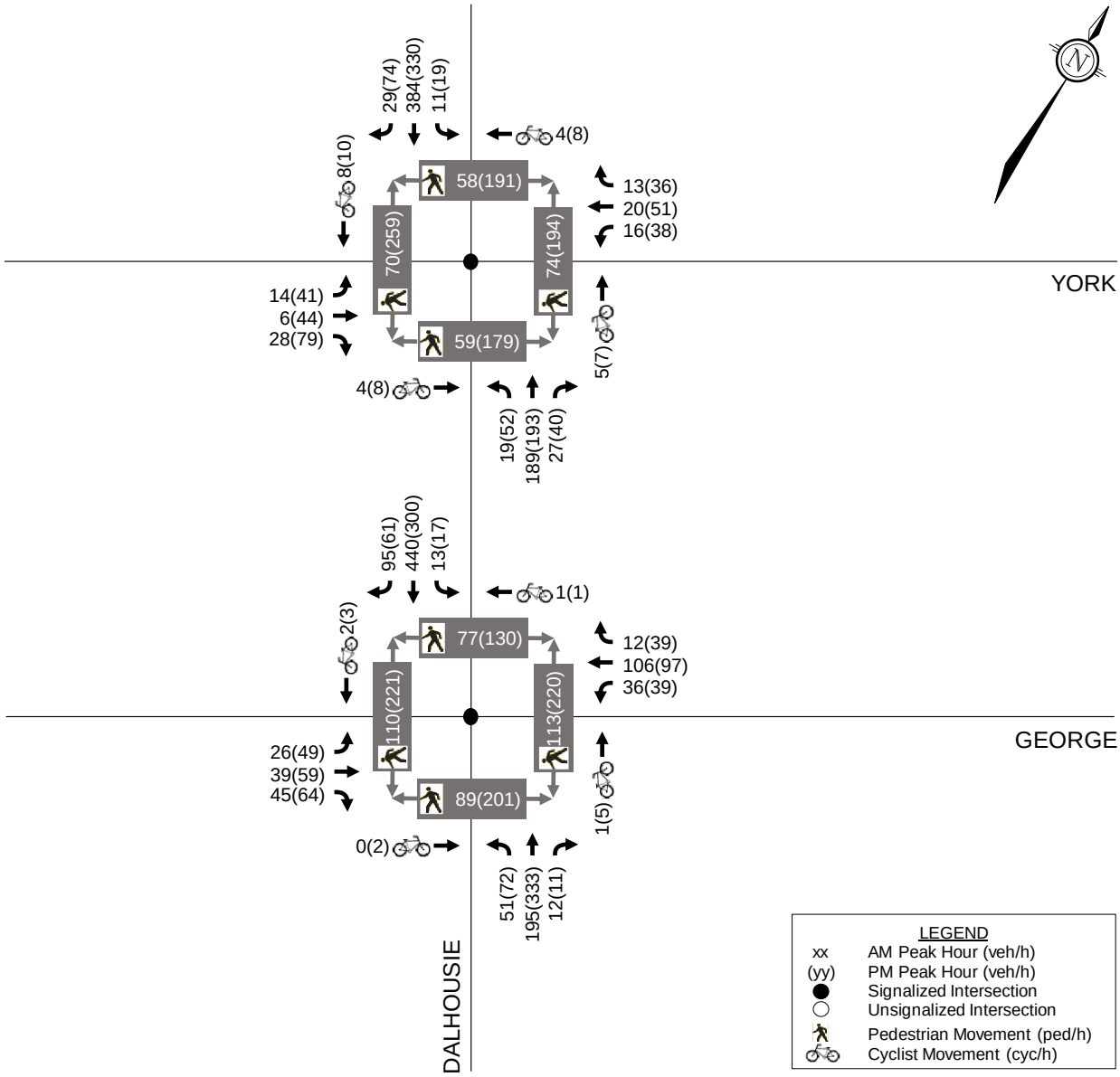
It is noted that the cycling volumes observed at Dalhousie Street/George Street are lower than typical, as the count was not conducted during the summer months.

Based on the traffic count data collected, the approximate average annual daily traffic (AADT) of Dalhousie Street, York Street, and George Street is estimated as follows. AADT is presented in vehicles per day, or vpd.

- Dalhousie Street (at York Street): 9,910 vpd;
- York Street (at Dalhousie Street): 2,040 vpd;
- George Street (at Dalhousie Street): 3,200 vpd.

All traffic count data previously discussed are included in **Appendix D**. Traffic volumes within the study area are shown in **Figure 5**.

Figure 5: Existing Traffic Volumes



2.1.8 Collision Records

Historical collision data from the last five years available was obtained from the City's Public Works and Service Department for the study area intersections and midblock segments. Copies of the collision summary reports are included in **Appendix E**.

The collision data has been evaluated to determine if there are any identifiable collision patterns, which are defined in the *TIA Guidelines* as 'more than six collisions in five years' for any one movement. Therefore, any impact type with seven or more collisions is discussed in further detail. The number of collisions at each intersection from January 1, 2017 to December 31, 2021 is summarized in **Table 3**.

Table 3: Reported Collisions

Intersection or Segment	Impact Types						Total
	Approach	Angle	Rear End	Sideswipe	Turning Movement	SMV[1]/ Other	
Dalhousie Street/ York Street	-	-	4	4	2	6	**16**
Dalhousie Street/ George Street	1	2	9	6	5	3	**26**
Dalhousie Street btwn York Street & George Street	-	4	-	3	1	7	**15**
York Street btwn Dalhousie Street & Cumberland Street	-	4	-	2	1	11	**18**
George Street btwn Dalhousie Street & Cumberland Street	-	2	-	6	1	4	**13**

1. SMV = Single Motor Vehicle

Dalhousie Street/York Street

A total of 16 collisions were reported at this intersection over the last five years, of which there were four rear-end impacts, four sideswipe impacts, two turning movement impacts, and six single vehicle/other impacts. Five collisions resulted in injuries, but none caused fatalities. Twelve of the 16 collisions (75%) occurred in poor driving conditions. Three collisions involved pedestrians, and two collisions involved cyclists.

Of the three collisions involving pedestrians, one involved a northbound vehicle travelling through the intersection, one involved an eastbound right-turning vehicle, and one involved a westbound left-turning vehicle. Of the two collisions involving cyclists, one involved an eastbound vehicle sideswiping an eastbound cyclist, and one involved a westbound left-turning vehicle and an eastbound cyclist travelling through.

Dalhousie Street/George Street

A total of 26 collisions were reported at this intersection over the last five years, of which there was one approaching impact, two angle impacts, nine rear-end impacts, six sideswipe impacts, five turning movement impacts, and three single vehicle/other impacts. Six collisions resulted in injuries, but none caused fatalities. Nine of the 26 collisions (35%) occurred in poor driving conditions. Three collisions involved pedestrians, and one collision involved a cyclist.

Of the nine rear-end impacts, four involved northbound vehicles, four involved southbound vehicles, and one involved eastbound vehicles.

Of the three collisions involving pedestrians, one involved a northbound left-turning vehicle, one involved a southbound right-turning vehicle, and one involved an eastbound left-turning vehicle. The collision involving a cyclist was the result of a southbound vehicle sideswiping a southbound cyclist.

Dalhousie Street between York Street and George Street

A total of 15 collisions were reported along this segment over the last five years, of which there were four angle impacts, three sideswipe impacts, one turning movement impact, and seven single vehicle/other impacts. Two collisions resulted in injuries, but none caused fatalities. Seven of the 15 collisions (47%) occurred in poor driving conditions. No collisions involved pedestrians, and one collision involved a cyclist.

Of the seven single vehicle/other impacts, four involved an impact with an unattended vehicle, one involved an impact with a sign pole or parking meter, one involved an impact with the curb, and one was unknown. The collision involving a cyclist was the result of a northbound vehicle sideswiping a northbound cyclist.

York Street between Dalhousie Street and Cumberland Street
A total of 18 collisions were reported along this segment over the last five years, of which there were four angle impacts, two sideswipe impacts, one turning movement impact, and 11 single vehicle/other impacts. Two collisions resulted in injuries, but none caused fatalities. Seven of the 18 collisions (39%) occurred in poor driving conditions. One collision involved a pedestrian, and one collision involved a cyclist.

Of the 11 single vehicle/other impacts, two were reported with unknown parameters, eight involved a vehicle reversing (likely from the angle parking spaces within the median of York Street), and one involved an eastbound left turning vehicle impacting a westbound left turning cyclist (likely at the median break immediately west of the angle parking spaces. In the interest of reducing the frequency of impacts involving a vehicle reversing, consideration could be given to removing the angle parking within the median of this section of York Street. It should be noted that this is envisioned in the *ByWard Market Public Realm Plan*, which is discussed further in Section 2.2.1.

George Street between Dalhousie Street and Cumberland Street
A total of 13 collisions were reported along this segment over the last five years, of which there were two angle impacts, six sideswipe impacts, one turning movement impact, and four single vehicle/other impacts. One collisions resulted in injuries, but none caused fatalities. Eight of the 13 collisions (62%) occurred in poor driving conditions. No collisions involved pedestrians, and one collision involved a cyclist.

2.2 Planned Conditions

2.2.1 Planned Transportation Projects

In the City's *2013 Transportation Master Plan (TMP)*, the Affordable Rapid Transit and Transit Priority (RTTP) Network identifies Rideau Street as a Transit Priority Corridor with Continuous Lanes, and Dalhousie Street-Murray Street-St. Patrick Street as a Transit Priority Corridor with Isolated Measures. For Rideau Street, the *2013 TMP* identifies all-day bus lanes between Sussex Drive and Cumberland Street, and peak-period bus lanes between Cumberland Street and Charlotte Street. For the corridor including Dalhousie Street, the *2013 TMP* identifies transit signal priority and possible parking lane conversion for use by transit.

The 2031 RTTP Network Concept includes additional transit signal priority on King Edward Avenue from Sussex Drive to Rideau Street, which is planned to complement the existing southbound bus lane and further accommodate the large number of buses turning onto Rideau Street.

The *2023 TMP Part 1* includes an Active Transportation Project List (updated to March 2023). Within the vicinity of the subject site, the list identifies future implementation of cycling facilities on Cumberland Street from George Street to St. Patrick Street, and on Murray Street from Sussex Drive to Cumberland Street. City staff have also advised that, as part of the redevelopment at 151 George Street, a pedestrian crossover (PXO) to connect the Waller Mall to the north side of George Street is proposed.

The ByWard Market-Somerset Street East Neighbourhood Bikeway project includes planned cycling improvements along York Street east of Cumberland Street, and along Beausoleil Drive between York Street and Chapel Street. The project seeks to improve connectivity to the ByWard Market, and would permit cyclists on York Street to cross King Edward Avenue, which is currently not permitted without dismounting. Excerpts of the planned modifications to York Street are included in **Appendix F**.

The *ByWard Market Public Realm Plan* identifies significant modifications to York Street and George Street and their intersections with Dalhousie Street, subject to longer-term implementation. While it is anticipated that these modifications will be completed beyond the timeframe of this study, a summary of the planned modifications to Dalhousie Street, York Street, and George Street are summarized as follows, and relevant excerpts of the public realm plan are included in **Appendix F**.

- Within the study area, Dalhousie Street is planned to include enhancements such as additional landscaping and benches, on-street parking lanes defined by mountable curbs, and interlocking paving treatments across the roadway at certain intersections (including York Street and George Street).

- York Street is planned to include a shared promenade on the northern side of the ROW and the roadway on the southern side, with significant landscaping on both sides of the roadway. These modifications will be achieved by removing the central median.

- George Street is planned to include widened pedestrian amenities and significant landscaping on the north side of the ROW. The roadway will be shifted south to be aligned with George Street east of Cumberland Street, by removing the perpendicular parking areas that are currently within the George Street ROW.

2.2.2 Other Area Developments

In proximity of the proposed development, there are multiple other developments that have recently been completed, are under construction, approved, or are in the approval process. Developments significant enough to require a transportation study and distribute new trips through the study area of this TIA are summarized as follows.

110 York Street, 137-141 George Street, and 321-325 Dalhousie Street
A Community Transportation Study/Transportation Impact Study was prepared by Novatech in December 2012, with a TIA addendum prepared by Novatech in July 2018. The 2018 TIA addendum included 282 high-rise dwellings and 11,805 ft^2 of ground-floor commercial at 137-141 George Street and 321 Dalhousie Street, 187 hotel rooms at 325 Dalhousie Street, and a 11,805 ft^2 convenience market at 321 Dalhousie Street. The addendum also included a 128-room hotel at 110 York Street, which is being superseded by this TIA. The high-rise residential development at 137-141 George Street has been approved, and the hotel at 325 Dalhousie Street is complete (operating as the Andaz hotel). The subject development will utilize the same access to the parking garage at 137-141 George Street. Therefore, the approved development at 137-141 George Street will be constructed prior to the proposed hotel expansion.

245 Rideau Street
A Transportation Brief was prepared by Delcan/Parsons in October 2013, with subsequent addenda submitted in May 2015 and July 2015, in support of a mixed-use development. A TIA addendum dated May 2019 was prepared by Novatech in support of a mixed-use development as well. Most recently, a Traffic Impact Statement dated April 2020 was prepared by Novatech, in support of a solely residential development, with approximately 727 dwellings. This development is currently under construction. The most recent traffic study estimated that the development would generate approximately 243 to 363 person trips during the peak hours.

2.3 Study Area and Time Periods

The study area for this report includes the boundary roadways Dalhousie Street, York Street, and George Street, as well as the following intersections:

- Dalhousie Street/York Street
- Dalhousie Street/George Street

The selected time periods for this TIA are the weekday AM and PM peak hours, as they represent the 'worst case' combination of site generated traffic and adjacent street traffic. This TIA considers the buildout year 2026 and five-year horizon 2031.

2.4 Access Design

The subject site itself will not include any accesses to the proposed hotel expansion. A full-movement driveway to George Street has been previously approved and will provide access to an underground parking garage that will serve the both the existing Andaz hotel and expansion, as well as the proposed 22-storey residential building at 137-141 George Street. The previously approved parking garage will be expanded to the west under the hotel at the 110-116 York Street property. Hotel loading/deliveries and a second garage access will be provided via Dalhousie Street, immediately south of the existing Andaz hotel building.

However, the proposed development will make use of a proposed loading and second garage access to Dalhousie Street immediately south of the Andaz hotel and subject site. The primary access to vehicle parking will be provided via a full-movement driveway to George Street, which will be shared with the proposed high-rise at 137-141 George Street. The 137-141 George Street development will be constructed prior to the proposed hotel expansion. The location of the full-movement access to George Street will be in a similar location as an existing gated access to the same parking lot at 137 George Street. As the access to George Street has been previously approved, it has not been reviewed in this TIA.

The proposed access to Dalhousie Street will replace the current temporary parking lot access at 137 George Street. The access will be reconstructed in the same location and will be designed in accordance with City standards. The proposed design of the loading access to Dalhousie Street has been evaluated using the relevant provisions of the City's *Private Approach By-Law* (PABL).

Section 25(1)(a) of the PABL identifies that a maximum of one two-way private approach is permitted for sites with 34m or less of frontage. The proposed loading access to Dalhousie Street meets this requirement.

Section 25(1)(c) of the PABL identifies a maximum width requirement of 9.0m for any two-way private approach, as measured at the street line. The width of the proposed access to Dalhousie Street is approximately 6.0m, meeting this requirement.

Section 25(1)(p) of the PABL identifies a minimum separation requirement of 3m between a private approach and the nearest property line, as measured at the street line. The proposed access will be adjacent to the existing Andaz building, but will be used by the hotel and the proposed expansion. Therefore, it is requested that the requirement be waived. The access will be separated from the southern property line by greater than 3m, meeting the requirement.

Section 25(1)(u) of the PABL identifies that a maximum grade of 2% is permitted for the first 9m inside the property line, for any private approach that serves a parking area of more than 50 parking spaces. This requirement will be met by the proposed access to Dalhousie Street, as a grade of approximately 1.2% is proposed within the first 9m of the Dalhousie Street ROW.

2.5 Development-Generated Travel Demand

2.5.1 Trip Generation

The number of peak hour person trips generated by the proposed development has been estimated using the *Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition*, which includes the Hotel land use (land use 310). The fitted curve equation has been used in estimating the number of peak hour trips generated by the proposed development. Any trips generated by the existing development have not been subtracted, for the purposes of maintaining a conservative study.

The *TRANS O-D Survey Report* identifies the subject as being located within the Ottawa Centre district. The mode shares for all trips to/from/within Ottawa Centre during the peak hours have been considered for this review, and can be summarized as follows:

- Auto Driver: 29% to 31% during the peak hours;
- Auto Passenger: 8% to 9% during the peak hours;
- Transit: 46% to 47% during the peak hours;
- Cyclist: 3% to 4% during the peak hours;
- Pedestrian: 12% to 13% during the peak hours.

The subject site is located within 600m of Rideau Station, which is served by O-Train Line 1. For the purposes of preparing a TIA, proposed developments within this distance to a rapid transit station are considered to be Transit-Oriented Developments (TOD). TOD mode shares have a significant transit share, given a site's proximity to rapid transit, and can be summarized as follows:

- Auto Driver: 15% during both peak hours;
- Auto Passenger: 5% during both peak hours;
- Transit: 65% during both peak hours;
- Non-Auto: 15% during both peak hours (assumed 5% cyclist and 10% pedestrian).

The 15% auto driver share has been assumed for this development, with an increase to the auto passenger share to reflect that the site is a hotel and an increased prevalence of pick-ups/drop-offs are anticipated. As the subject site is also located within the ByWard Market, the pedestrian share has also been increased. The transit share has subsequently been decreased. In summary, the assumed mode shares of the proposed development are 15% auto driver, 15% auto passenger, 40% transit, 5% cyclist, and 25% pedestrian.

As the *ITE Trip Generation Manual* estimates trip generation in vehicles per hour, a trip to person trip adjustment factor of 1.28 has been applied, consistent with the City's *TIA Guidelines*. The estimated number of peak hour trips generated by the proposed hotel expansion are shown in **Table 4** and **Table 5**.

Table 4: Proposed Development – Peak Hour Trip Generation

Land Use	ITE Code	Units	AM Peak Hour (pph[1])			PM Peak Hour (pph)		
			IN	OUT	TOT	IN	OUT	TOT
Hotel	310	154 rooms	50	40	*90*	56	54	*110*

1. pph: Person Trips per Peak Hour

Table 5: Proposed Development – Peak Hour Trips by Mode Share

Travel Mode	Mode Share	AM Peak Hour			PM Peak Hour		
		IN	OUT	TOT	IN	OUT	TOT
Peak Hour Person Trips		**50**	**40**	***90***	**56**	**54**	***110***
Auto Driver	15%	8	6	*14*	8	8	*16*
Auto Passenger	15%	8	6	*14*	8	8	*16*
Transit	40%	20	16	*36*	23	21	*44*
Cyclist	5%	2	2	*4*	3	3	*6*
Pedestrian	25%	12	10	*22*	14	14	*28*

From the previous tables, the proposed development is estimated to generate 90 person trips (including 14 vehicle trips) during the AM peak hour, and 110 person trips (including 16 vehicle trips) during the PM peak hour.

2.5.2 Trip Distribution and Assignment

As the proposed development is projected to generate 14 to 16 vehicle trips during the peak hours, and no intersection analysis is required per Section 2.6, the site-generated volumes have not been distributed to the study area intersections.

Previous traffic studies in support of 137-141 George Street and 110 York Street estimated a significantly higher number of trips generated by the proposed hotel expansion than presented in this TIA. The 2018 TIA prepared in support of the hotel expansion estimated site-generated volumes of 127 person trips (including 31 vehicle trips) during the AM peak hour and 144 person trips (including 36 vehicle trips) during the PM peak hour. Therefore, no new recommendations for the George Street access are anticipated. Some trips generated by the hotel expansion are anticipated to enter and exit the site via the new Dalhousie Street access.

2.6 Exemptions Review

This module reviews possible exemptions from the final TIA, as outlined in the *TIA Guidelines*. The applicable exemptions for this site are shown in **Table 6**.

Table 6: TIA Exemptions

Module	Element	Exemption Criteria	Status
4.1 Development Design	*4.1.2* Circulation and Access	• Required for site plan control and zoning by-law amendment applications	Not Exempt
	4.1.3 New Street Networks	• Required for draft plan of subdivision applications	Exempt
4.2 Parking	*All elements*	• Required for site plan control and zoning by-law amendment applications	Not Exempt
4.6 Neighbourhood Traffic Calming	*All elements*	• If all of the following criteria are met: 1. Access is provided to a collector or local roadway 2. Application is for zoning by-law amendment or draft plan of subdivision 3. Development generates more than 75 vehicle trips 4. Site trip infiltration is expected, and site traffic will increase peak hour volumes by 50% or more along the route between the site and an arterial roadway 5. The subject street segment is adjacent to two or more of the following significant sensitive land uses: ○ School (within 250m walking distance) ○ Park ○ Retirement/older adult facility ○ Licensed child care centre ○ Community centre ○ 50+% of adjacent properties along the route(s) are occupied by residential lands and at least ten dwellings are occupied	Exempt
4.7 Transit	*4.7.1* Transit Route Capacity	• Required when proposed development generates more than 75 transit trips	Exempt
	4.7.2 Transit Priority Requirements	• Required when proposed development generates more than 75 vehicle trips	Exempt
4.8 Network Concept	*All elements*	• Required when proposed development generates more than 200 person trips during the peak hour in excess of the equivalent volume permitted by established zoning	Exempt
4.9 Intersection Design	*All elements*	• Required when proposed development generates more than 75 vehicle trips	Exempt

The following modules are included in this TIA report:

- Module 4.1: Development Design
- Module 4.2: Parking
- Module 4.3: Boundary Streets
- Module 4.5: Transportation Demand Management

3.0 BACKGROUND NETWORK TRAVEL DEMAND

3.1 General Background Growth Rate

A review of older traffic counts from 2016 indicate that peak hour traffic volumes for most movements have reduced between 2016 and 2019/2022. The subject site is also located within an inner urban area. For these reasons, no background growth has been applied to the study area roadways Dalhousie Street, York Street, and George Street.

3.2 Other Area Developments

In proximity of the proposed development, there are multiple other developments that have recently been completed, are under construction, approved, or are in the approval process. Based on the City's Development Application Search Tool, most development applications in the surrounding areas are not significant enough to require a transportation study, and therefore those developments have not been listed in this TIA. Developments significant enough to require a transportation study and distribute new trips through the study area of this TIA are summarized as follows. Relevant excerpts of the traffic studies in support of the below are included in **Appendix G**.

110 York Street, 137-141 George Street, and 321-325 Dalhousie Street
A Community Transportation Study/Transportation Impact Study was prepared by Novatech in December 2012, with a TIA addendum prepared by Novatech in July 2018. The 2018 TIA addendum included 282 high-rise dwellings and 11,805 ft^2 of ground-floor commercial at 137-141 George Street and 321 Dalhousie Street, 187 hotel rooms at 325 Dalhousie Street, and a 11,805 ft^2 convenience market at 321 Dalhousie Street. The addendum also included a 128-room hotel at 110 York Street, which is being superseded by this TIA. The high-rise residential development at 137-141 George Street has been approved, and the hotel at 325 Dalhousie Street is complete (operating as the Andaz hotel). The subject development will utilize the same access to the parking garage at 137-141 George Street. Therefore, the approved development at 137-141 George Street will be constructed prior to the proposed hotel expansion.

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The projected traffic volumes generated by the other area developments listed above are included in **Figure 6**. These traffic volumes have been added to the existing traffic volumes to represent the 2026/2031 background traffic volumes, which are included in **Figure 7**.

Figure 6: Other Area Development-Generated Traffic Volumes

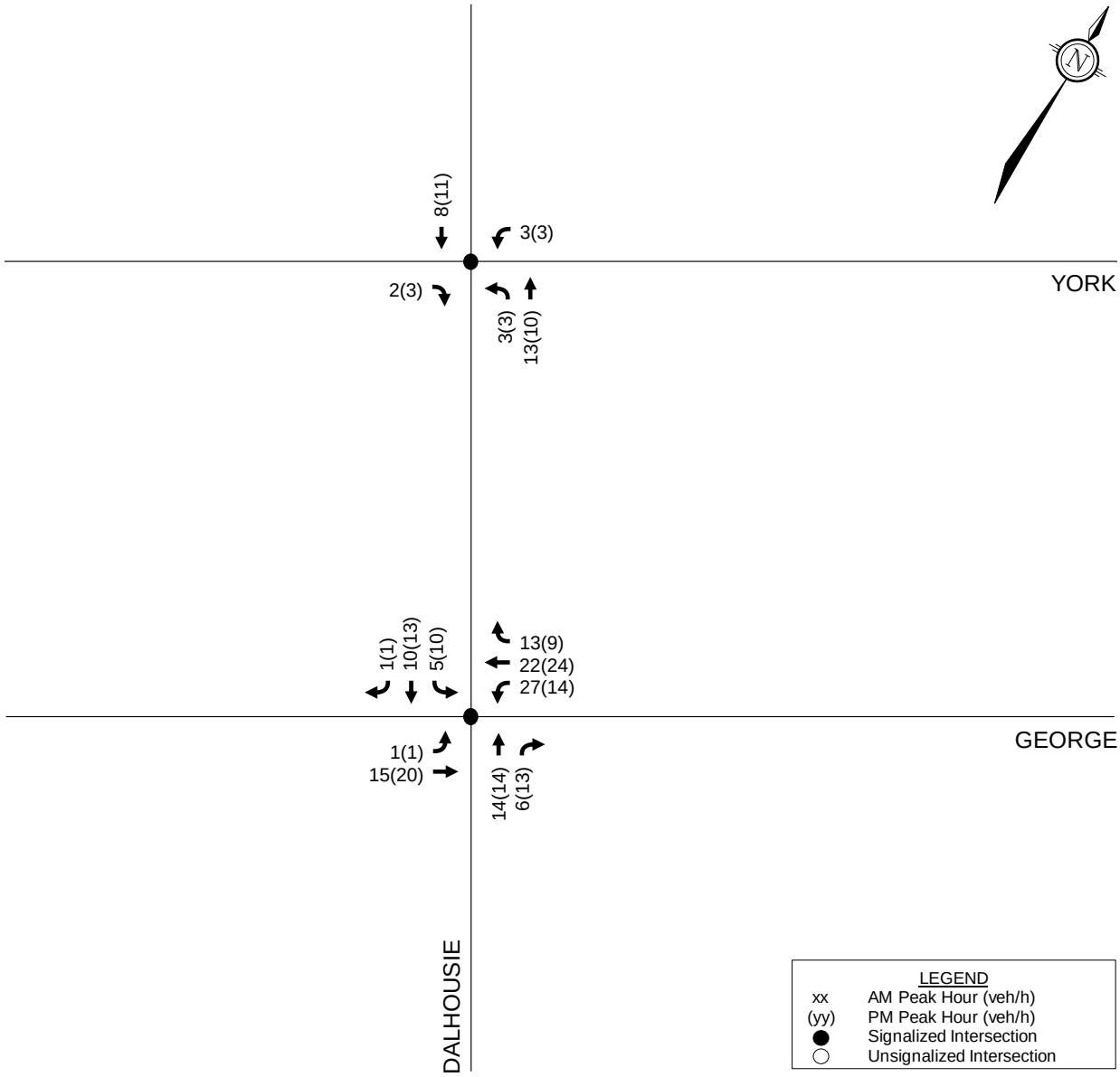
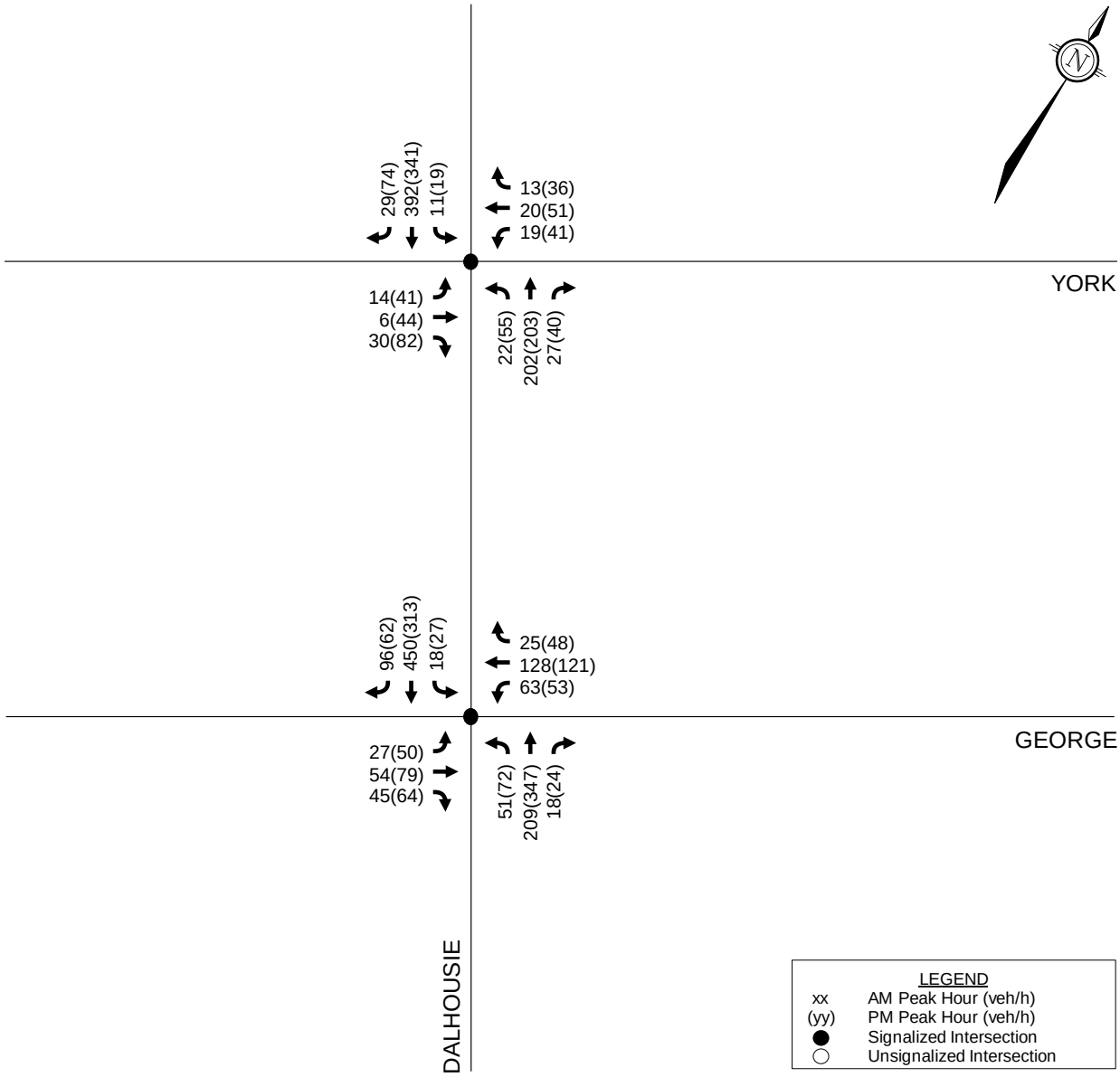


Figure 7: 2026/2031 Background Traffic Volumes



3.3 Demand Rationalization

The Demand Rationalization module includes identifying any locations and approaches where total auto demand is projected to exceed capacity, and what reduction in peak hour volumes are required for demand to meet capacity. However, determining whether any approach has volumes that exceed capacity requires intersection capacity analysis, which is outside the scope of this TIA (as shown in **Table 6**).

4.0 ANALYSIS

4.1 Development Design

4.1.1 Design for Sustainable Modes

Entrances to the building will connect to the existing sidewalk on York Street, connecting to the pedestrian network throughout the study area and the ByWard Market.

A total of nine interior bicycle parking spaces are proposed for the hotel within the underground parking garage.

The hotel zone on Dalhousie Street in front of the existing Andaz Hotel entrance will be maintained. A new curb ramp will be provided to provide improved accessibility within the hotel zone.

The subject site is within a five-minute (400m) walk of bus stops on Dalhousie Street, Murray Street, Rideau Street, Sussex Drive, and King Edward Avenue, and within a 600m walk of Rideau LRT Station. These are served by a multitude of OC Transpo routes, as listed in **Table 2**.

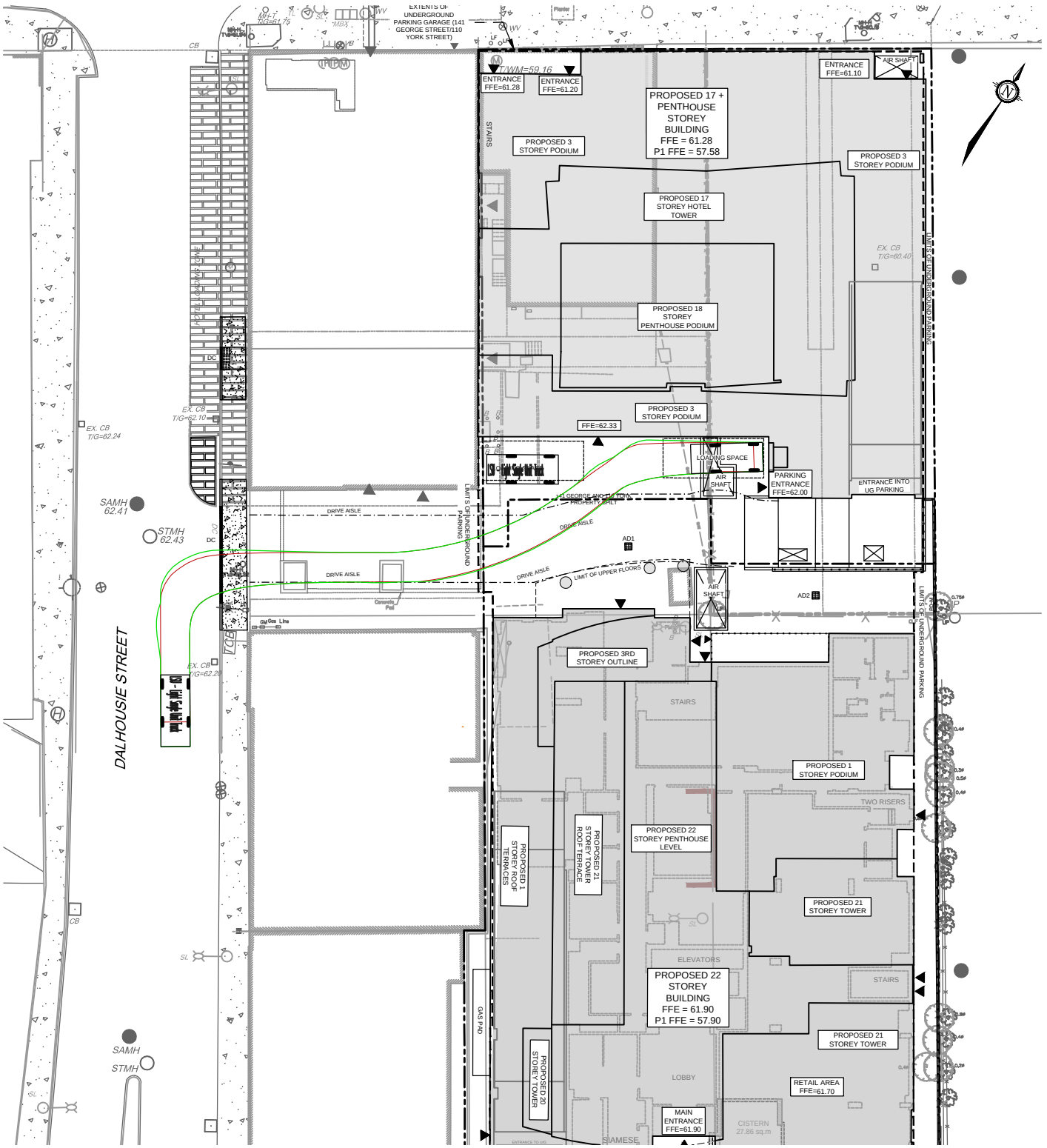
A review of the City's *Transportation Demand Management (TDM)-Supportive Development Design and Infrastructure Checklist* has been conducted. A copy of the non-residential TDM checklist is included in **Appendix H**. All applicable required TDM-supportive design and infrastructure measures in the TDM checklist are met. In addition to the required measures, the following 'basic' or 'better' measures will be included by the development:

- Locate building close to the street, and do not locate parking areas between the street and building entrances;
- Locate building entrances in order to minimize walking distances to sidewalks and transit stops/stations;
- Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort;
- Provide safe, direct, and attractive walking routes from building entrances to nearby transit stops;
- Provide a designated area for carpool drivers (plus taxis and ride-hailing services) to drop off or pick up passengers without using fire lanes or other no-stopping zones;
- Provide on-site amenities to minimize mid-day or mid-commute errands.

4.1.2 Circulation and Access

Loading will be internalized and accessed via the proposed driveway to Dalhousie Street. Two loading spaces are proposed adjacent to the south side of the hotel, and adjacent to the north side of the drive aisle leading to the underground parking garage. Turning movements for loading trucks have been prepared using a Light Single Unit (LSU) design vehicle, and are included in **Figures 8** through **11**. Loading trucks will drive forward into the Dalhousie Street access, turn around within the site, and drive forward out of the site. Garbage collection is also anticipated to occur within the proposed loading spaces.

No on-site fire route is proposed as part of the development (i.e. fire trucks responding at the proposed development will be curbside on York Street).



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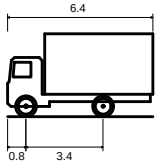

LSU - Light Single Unit Truck

Overall Length	6.400m
Overall Width	2.600m
Overall Body Height	3.650m
Min Body Ground Clearance	0.445m
Track Width	2.600m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6.300m

110-116 YORK STREET

TURNING MOVEMENT (LSU)

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DATE DEC 2024 | JOB 112142 | FIGURE FIGURE 8

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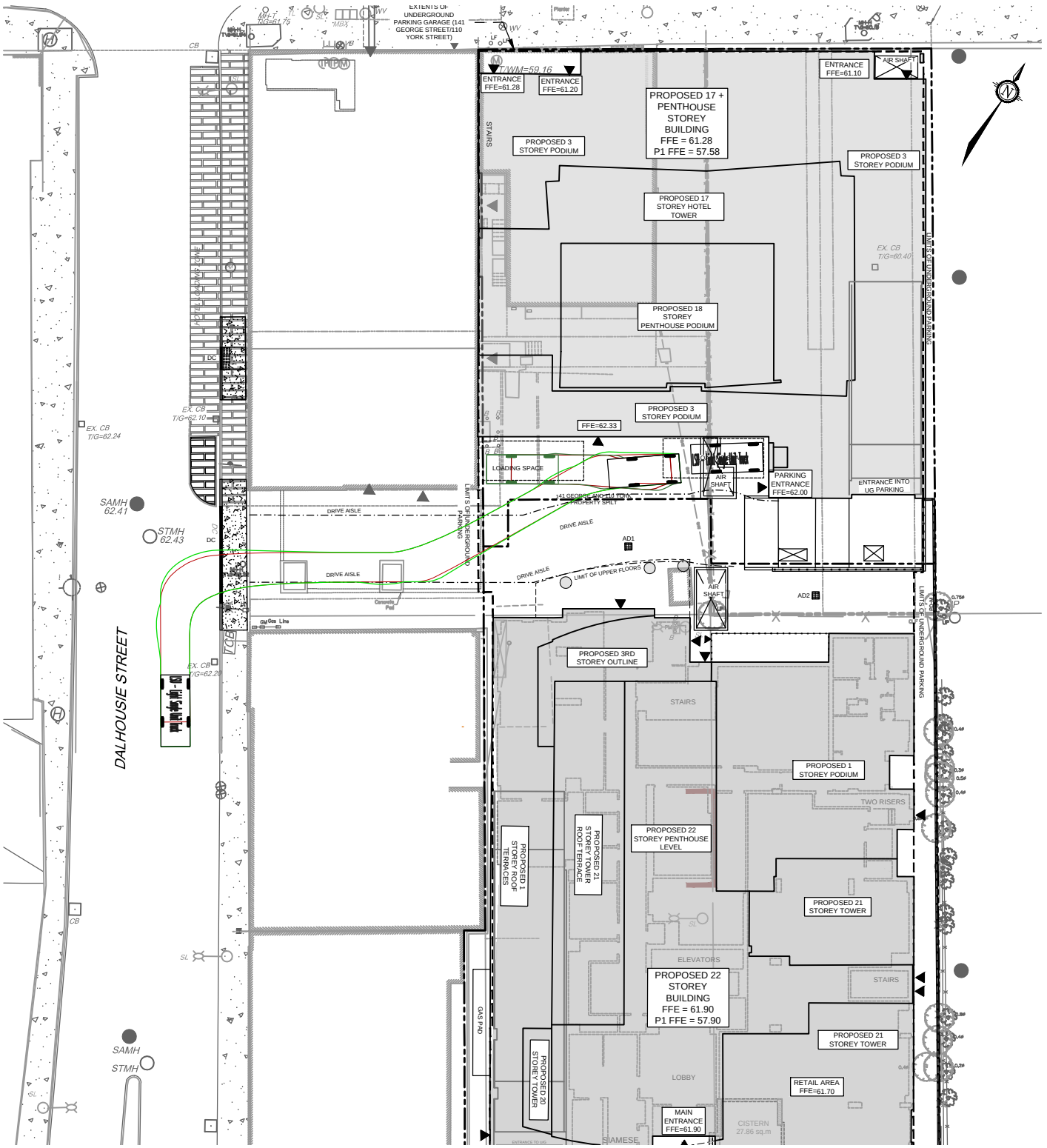

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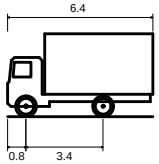

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110-116 YORK STREET

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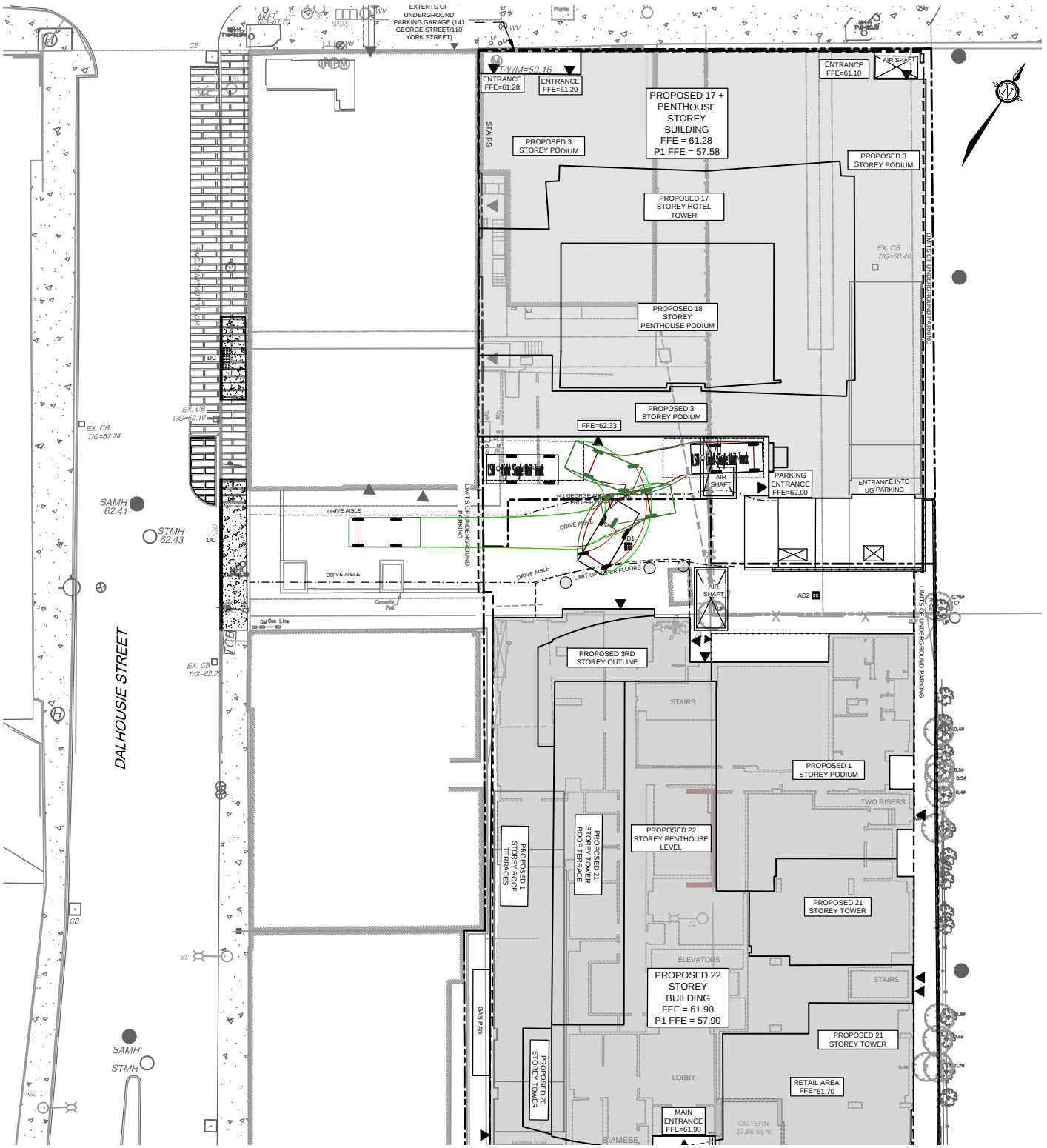

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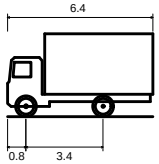

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110-116 YORK STREET

TURNING MOVEMENT (LSU)

SCALE 1 : 500 (0 5 10 15 20)

DATE DEC 2024 | JOB 112142 | FIGURE FIGURE 10

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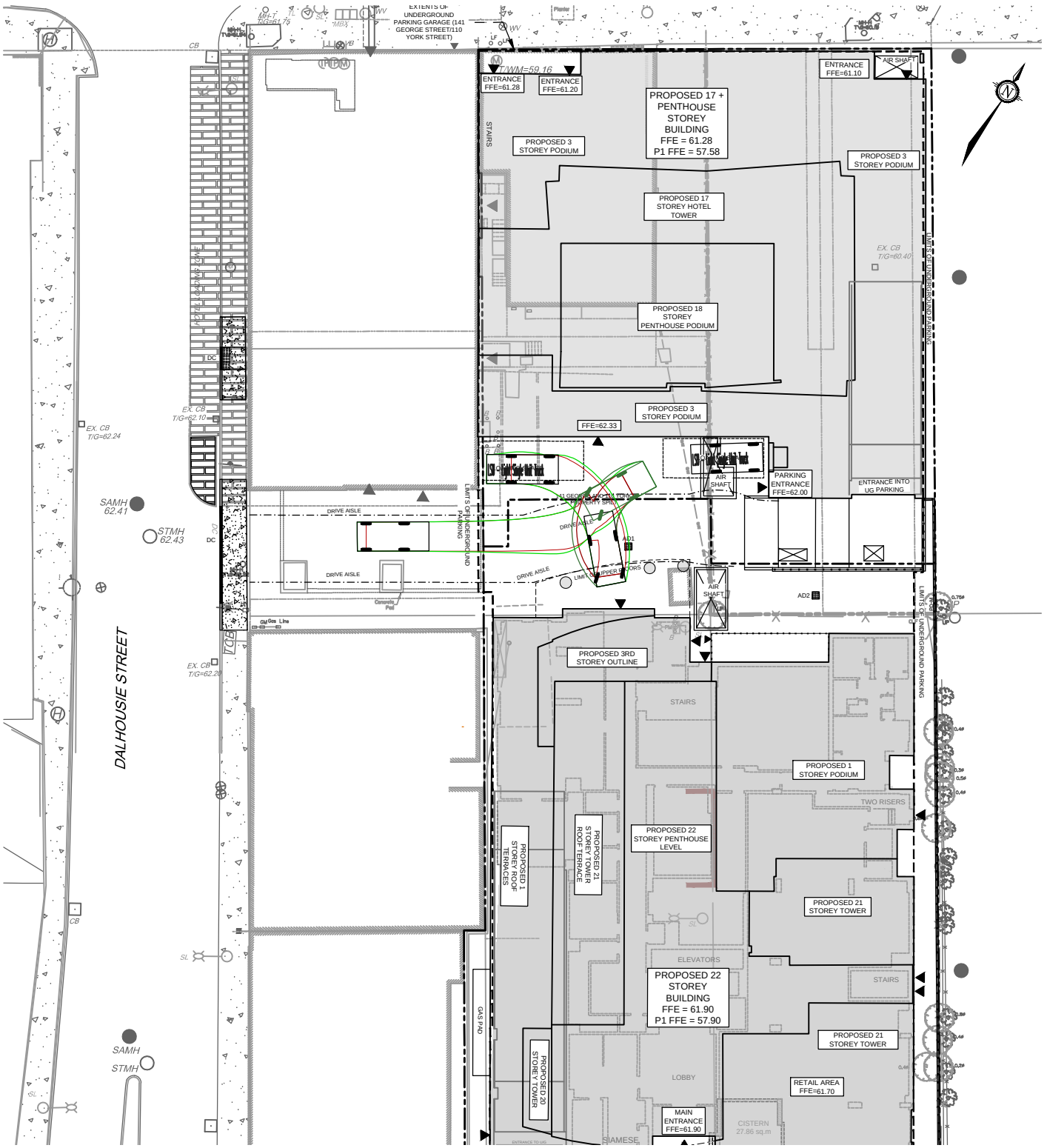

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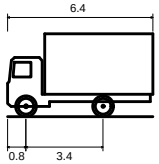

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110-116 YORK STREET

TURNING MOVEMENT (LSU)

SCALE 1 : 500 (0 5 10 15 20)

DATE DEC 2024 | JOB 112142 | FIGURE FIGURE 11

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4.2 Parking

The subject site is located in Area A on Schedule 1 and Area Z on Schedule 1A of the City's *Zoning By-Law (ZBL)*. Within Area Z, there is no requirement for vehicle parking for hotels or residents of residential developments. As the parking garage will be shared between the existing/proposed hotel at 321-325 Dalhousie Street and 110-116 York Street and the mixed use development at 137-141 George Street, the proposed vehicle parking supply and requirements have been reviewed considering the overall development. A summary of the parking review is included in **Table 7**.

Table 7: Required and Proposed Parking

Land Use	Rate	Units/GFA	Required	Provided
Minimum Vehicle Parking (Section 101/102 of ZBL)				
Hotel	No requirement in Area Z	154 rooms	0	140
High-Rise Dwelling	No requirement for residents, and 0.083 spaces per unit for visitors (per Urban Exception #2031)	297 units	0	140
			25	25
Retail Store	No requirement in Area Z	468 m^2	0	0
		Total	**25**	**305**
Maximum Vehicle Parking (Section 103 of ZBL)				
Hotel	No maximum requirement in Area Z	154 rooms	-	140
High-Rise Dwelling	1.5 per dwelling (combined resident/visitor)	297 units	446	165
Retail Store	1.0 per 100 m^2 GFA	468 m^2	5	0
		Total	**451**	**305**
Minimum Bicycle Parking (Section 111 of ZBL)				
Hotel	1.0 per 1,000 m^2 GFA	7,186 m^2	8	9
		Total	**8**	**9**
Minimum Loading Space (Section 113 of ZBL)				
Hotel	2 required when GFA is 5,000-9,999 m^2	7,186 m^2	2	2
		Total	**2**	**2**

From the previous table, the proposed parking supply meets the minimum and maximum vehicle parking requirements, minimum bicycle parking requirements, and minimum loading requirements.

4.3 Boundary Streets

This section provides a review of the boundary streets Dalhousie Street, York Street, and George Street, using complete streets principles. The *Multi-Modal Level of Service (MMLOS) Guidelines*, produced by IBI Group in October 2015, were used to evaluate the levels of service for each alternative mode of transportation, based on existing conditions. Per Exhibit 22 of the *MMLOS Guidelines*, the boundary streets have been evaluated based on the targets for roadways within the Central Area. It is noted that Exhibit 22 of the *MMLOS Guidelines* identifies identical targets for roadways within 600m of a rapid transit station, which also applies to the boundary streets.

A detailed segment MMLOS review of the boundary streets is included in **Appendix I**. A summary of the segment MMLOS analysis is provided below in **Table 8**.

Table 8: Segment MMLOS Summary

Segment	PLOS		BLOS		TLOS		TkLOS	
	Actual	Target	Actual	Target	Actual	Target	Actual	Target
Dalhousie Street	**B**	A	A	D	E	-	B	E
York Street	**B**	A	A	B	-	-	-	-

The results of the segment MMLOS review can be summarized as follows:

- No boundary streets meet the target pedestrian level of service (PLOS);
- All boundary streets meet the target bicycle level of service (BLOS);
- Dalhousie Street achieves a transit level of service (TLOS) E;
- Dalhousie Street meets the target truck level of service (TkLOS).

Dalhousie Street achieves a PLOS B on both sides of the roadway. Exhibit 4 of the *MMLOS Guidelines* identifies that, for roadways with average curb lane volumes greater than 3,000 vpd, a PLOS A is only achievable if the operating speed is reduced to less than 30 km/h.

York Street achieves a PLOS B on the north side of the roadway and a PLOS A on the south side of the roadway. Exhibit 4 of the *MMLOS Guidelines* identifies that the target PLOS A can be achieved on the north side of York Street if a boulevard with a minimum width of 0.5m is provided. Based on the crowding criteria outlined in Table 1 of the City's *Addendum to the MMLOS Guidelines*, a minimum sidewalk width of 3.0m is required to achieve the target PLOS A, based on observed peak hour pedestrian volumes. These improvements are likely to be addressed based on the planned modifications for York Street, per the *ByWard Public Realm Plan*.

4.4 Transportation Demand Management

4.4.1 Context for TDM

The proposed development is an expansion of the Andaz hotel, with an additional 154 hotel rooms being proposed. Customers of the hotel that are travelling to/from destinations within the ByWard Market are anticipated to travel as pedestrians, which is reflected by the assumed pedestrian mode share of 25% that was outlined in Section 2.5.1. An auto passenger share of 15% and transit share of 40% were assumed to reflect the anticipated pick-ups/drop-offs to the hotel or arrivals/departures to Rideau Station. For example, customers may take a taxi, ride-hailing service, or transit from the Ottawa International Airport to the proposed development.

4.4.2 Need and Opportunity

The subject site is located within the 'ByWard Market' special district on Schedule B2 of the City of Ottawa's Official Plan. The implemented zoning for the property is 'Mixed-Use Downtown' (MD2), and the site is not located in any Community Design Plan or Secondary Plan areas.

The assumed mode shares of 15% driver, 15% passenger, 40% transit, 5% cyclist, and 25% pedestrian are generally consistent with the TOD mode shares identified by the City. Based on the subject site's location within the ByWard Market, proximity to nearby tourist attractions and amenities, and proximity to rapid transit, it is anticipated that these mode shares will be met. Failure to meet the driver share by 10% (i.e. a 25% driver share) would result in an approximate increase of 14 to 16 vehicle trips during the peak hours.

4.4.3 TDM Program

A review of the non-residential *TDM Measures Checklist* has been conducted by the proponent, and the completed checklist is included in **Appendix H**. The proponent will consider the following TDM measures:

- Display local area maps with walking/cycling access route and key destinations at major entrances;
- Display relevant transit schedules and route maps at entrances;
- Provide on-site amenities/services to minimize mid-day or mid-commute errands.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the foregoing, the conclusions and recommendations of this TIA can be summarized as follows:

Site-Generated Traffic

- The proposed development is estimated to generate 90 person trips (including 14 vehicle trips) during the AM peak hour, and 110 person trips (including 16 vehicle trips) during the PM peak hour.

Access Design

- The primary access to vehicle parking will be provided via a full-movement driveway to George Street, which will be shared with the proposed high-rise at 137-141 George Street. This access has been approved, and the 137-141 George Street development will be constructed prior to the proposed hotel expansion. The proposed development will make use of a proposed loading and second garage access to Dalhousie Street immediately south of the Andaz hotel and subject site.

- The proposed access to Dalhousie Street generally meets the provisions of the *Private Approach By-Law* (PABL), except for Section 25(1)(p). This section identifies a minimum separation requirement of 3m between a private approach and the nearest property line, as measured at the street line. The proposed access will be adjacent to the existing Andaz building, but will be used by the hotel and the proposed expansion. Therefore, it is requested that the requirement be waived. The access will be separated from the southern property line by greater than 3m, meeting the requirement.

Development Design and Parking

- Entrances to the building will connect to the existing sidewalk on York Street, connecting to the pedestrian network throughout the study area and the ByWard Market.

- The hotel zone on Dalhousie Street in front of the existing Andaz Hotel entrance will be maintained. A new curb ramp will be provided to provide improved accessibility within the hotel zone.

- The subject site is within a five-minute (400m) walk of bus stops on Dalhousie Street, Murray Street, Rideau Street, Sussex Drive, and King Edward Avenue, and within a 600m walk of Rideau LRT Station.

- All applicable required Transportation Demand Management (TDM)-supportive design and infrastructure measures in the TDM checklist are met.

- Loading will be internalized and accessed via the proposed driveway to Dalhousie Street. Two loading spaces are proposed adjacent to the south side of the hotel, and adjacent to the north side of the drive aisle leading to the underground parking garage. Loading trucks will drive forward into the Dalhousie Street access, turn around within the site, and drive forward out of the site. Garbage collection is also anticipated to occur within the proposed loading spaces.

- No on-site fire route is proposed as part of the development (i.e. fire trucks responding at the proposed development will be curbside on York Street).

- The proposed parking supply meets the minimum and maximum vehicle parking requirements, minimum bicycle parking requirements, and minimum loading requirements.

Boundary Streets

- The results of the segment MMLOS review can be summarized as follows:

    - No boundary streets meet the target pedestrian level of service (PLOS);
    - All boundary streets meet the target bicycle level of service (BLOS);
    - Dalhousie Street achieves a transit level of service (TLOS) E;
    - Dalhousie Street meets the target truck level of service (TkLOS).

- Dalhousie Street achieves a PLOS B on both sides of the roadway. The target PLOS A is only achievable if the operating speed is reduced to less than 30 km/h.

- York Street achieves a PLOS B on the north side of the roadway and a PLOS A on the south side of the roadway. A minimum sidewalk width of 3.0m is required to achieve the target PLOS A, based on observed peak hour pedestrian volumes. These improvements are likely to be addressed based on the planned modifications for York Street, per the *ByWard Public Realm Plan*.

Transportation Demand Management

- The following TDM measures will be considered by the proponent:
    - Display local area maps with walking/cycling access routes and key destinations at major entrances;
    - Display relevant transit schedules and route maps at entrances;
    - Provide on-site amenities/services to minimize mid-day or mid-commute errands.

Based on the foregoing, the proposed development is recommended from a transportation perspective.

NOVATECH

Prepared by:

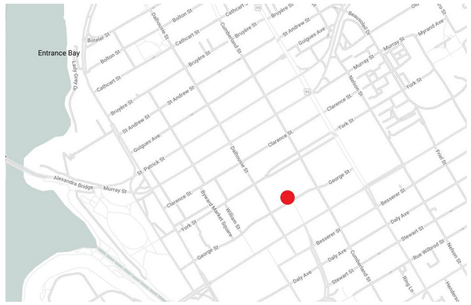
Joshua Audia, P.Eng.
Project Engineer | Transportation

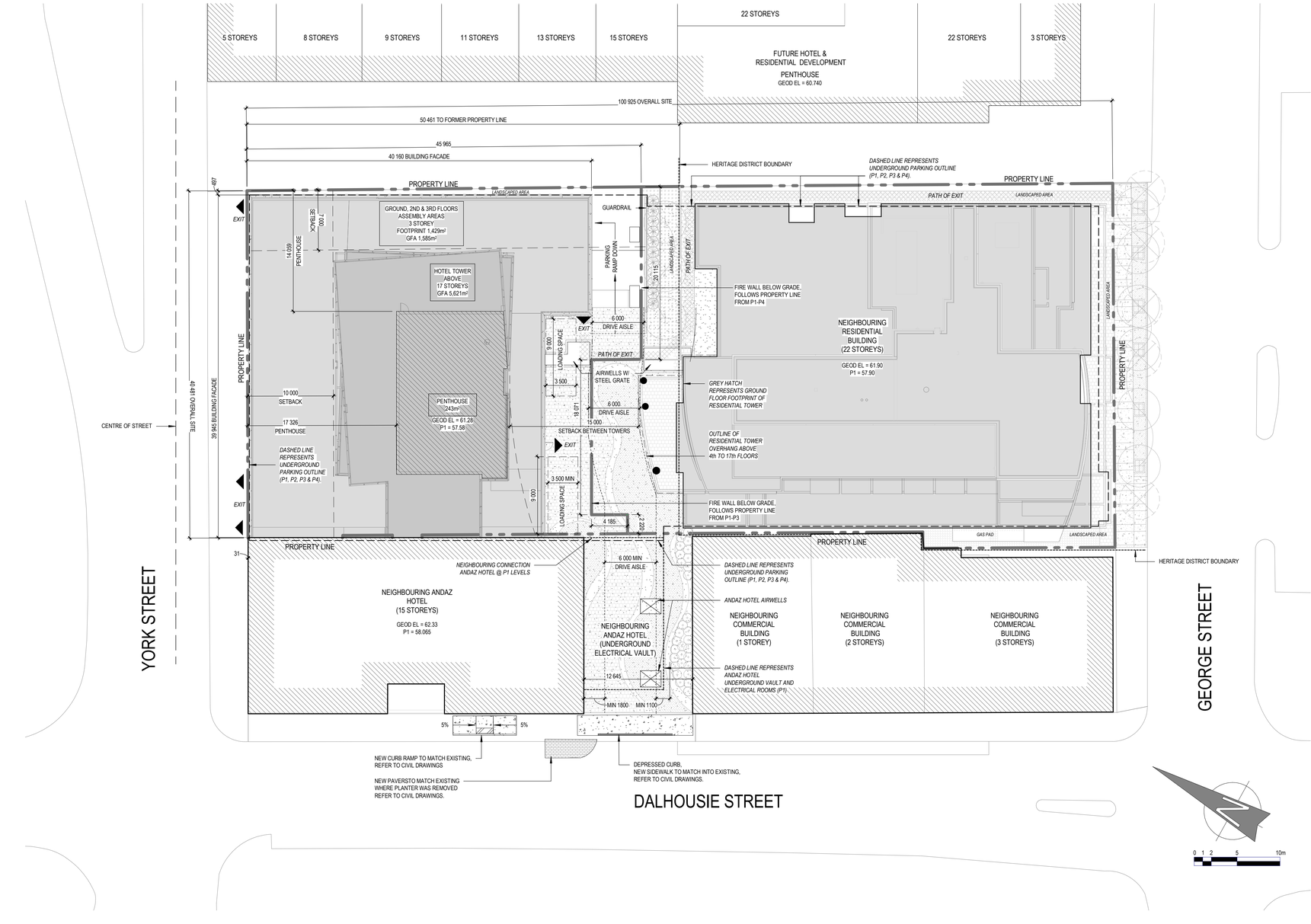
Reviewed by:

Brad Byvelds, P.Eng.
Senior Project Manager | Transportation

APPENDIX A

Site Plan





SITE PLAN AT GROUND

1 : 250

1 / A100

NOTES
• FOR EXISTING SITE CONDITIONS, SEE SURVEY PLAN BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD., SUBMITTED SEPERATELY.
• FOR NEW GRADES AND SITE SERVICES, SEE CIVIL ENGINEERING PLANS BY NOVATECH ENGINEERING CONSULTANTS, SUBMITTED SEPERATELY.
• FOR NEW LANDSCAPING DESIGN, SEE LANDSCAPING PLANS BY JAMES B. LENNOX & ASSOCIATES, SUBMITTED SEPERATELY.

OCCUPANCY	UNITS / STOREYS	PROPOSED ZONING GFA
Hotel Rooms	4th to 12th floors (11 rooms/floor) 13th to 17th floors (11 rooms/floor) Minimum 10% of rooms are required to be Barrier-Free (BF) and distributed throughout the storeys.	404m² x 9 floors 397m² x 5 floors TOTAL = 5,621m² 19 of 154 units (12%) provided
Assembly Hotel Administration	Ground floor 2nd floor 3rd floor	611m² /floor 874m² /floor 100m² /floor TOTAL = 1,585m²
	TOTAL	**7,206m²**

MIXED-USE WITH GROUND FLOOR COMMERCIAL - ZONING - MD2 (2031) S307
(COMBINED WITH 141 GEORGE STREET)

ZONING RULE	REQUIREMENT	PROVIDED
Minimum lot area	No minimum	Combined lots 141 George Street = 3,109.10m² 110 York = 520.72m² 116 York = 1,015.88m² = 4,645.70m²
Minimum lot width	No minimum	40.47m along York Street
Minimum front yard	No minimum	0.03m
Minimum interior side yard	No minimum	West side connected to adjacent hotel. 0.48m on East side of building.
Minimum rear yard	No minimum	Combined lot with 141 George Street. 5.38m and 5.75m
Maximum building height	12m high within 9m from York. 52m high overall 12m high within 8m from back. As per OUTDATED Schedule 489; not including 116 York. Projections permitted beyond building height. As per Exception 2919 (By-law 2023-502)	12.6m within 10m from York and Podium. 54.3m Tower.
Maximum floor space index	Not applicable	-
Minimum width of landscape area	No minimum except that where a yard is provided and not used for required driveways, aisles, parking, loading spaces, or outdoor commercial patio, the whole yard must be landscaped	Yard used for required driveway, aisles and loading spaces, otherwise whole yard to be landscaped.
Provisions for buildings 10 storeys and higher (By-law 2019-353)	Not applicable. As per Exception 2919 (By-law 2023-502)	-
Ground floor use	100% of ground floor fronting a street (excluding lobby area, mechanical room, and access to other floors for a minimumm depth of 3m, must be occupied by permitted use. Total gross area of lobbies, mechanical rooms and access to other floors must not exceed 50% of ground floor gross area. Hotel lobby may be included in the calculation of ground floor frontage. As per Exception 2919 (By-law 2023-502)	100% of ground fronting York Street (excluding exits from other floors) for a minimumm depth of 3m, is occupied by permitted Hotel use. Total gross area of lobbies, mechanical rooms and access to other floors does not exceed 50% of ground floor gross area. Permitted Hotel use occupies more than 50% of ground floor and separate and direct access is provided on York and Dalhousie Street from existing Hotel building.

AMENITY AND PARKING REQUIREMENTS
ZONING - MD2 (2031) S307
(COMBINED WITH 141 GEORGE STREET)

ZONING MECHANISM	REGULATION	PROPOSED
Shared Parking **141 GEORGE** **110 & 116 YORK**	None required for Hotel, Residential or Commercial use. 25 visitor parking spaces required	P1 30 spaces P2 44 spaces P3 44 spaces P4 47 spaces 6.0m drive aisle provided. P1 20 spaces P2 40 spaces P3 40 spaces P4 40 spaces **Total: 305 spaces shared between building users.** 141 George 165 spaces 110 York 140 spaces 25 Visitor parking to be clearly marked.
Barrier-Free Parking (110-116 York)	Requires 4 barrier-free spaces (Traffic and Parking By-Law 2017-301)	1 provided on every parking level. **Total: 4 spaces**
Minimum Bicycle Parking	Hotel: 1 per 1,000m² of GFA 7,186m² GFA / 1,000m² = 8 bicycle parking spaces	9 indoor spaces provided.
Loading	2 spaces required. Minimum 3.3m width of a loading space. As per Exception 2919 (By-law 2023-502)	2 outdoor spaces provided.

GENERAL NOTES

1. These architectural documents are the exclusive property of NEUF architect(e)s inc. and cannot be used, copied, or reproduced without written pre-authorisation.
2. The contractor is responsible for checking and verifying all dimensions with respect to the project. Any discrepancy shall be reported to the architect.
3. The architect must be notified of all errors, omissions, and discrepancies between these documents and those of the other professionals.
4. Do not scale drawings. The dimensions on these documents must be read and not measured.
5. These drawings are to be read in conjuction with all material relevant to the project.

Mechanical - Electrical Engineer
JAIN
7405 East Danbro Crescent, 2nd Floor Mississauga, Ontario, L5N 6P8
T 905 285 9900 jainconsultants.com

Structural Engineer
Goodeve Structural Inc.
18-77 Auriga Drive, Ottawa ON K2E 7Z7
T 613 226 4558 goodevestructural.ca

Landscape Architect
James B. Lennox & Associates
3002, Carling Avenue, Ottawa, ON, K2H 5A6
T 613 725 5168 jbla.ca

Civil
Novatech Eng. Consultants Ltd.
240, Michael Cowpland Drive, Suite 200, Ottawa ON K2M 1P6
T 613 234 9643 novatech-eng.com

Architect
NEUF Architectes INC.
10 Rideau Street, 4th floor, Ottawa ON K1N 9J1
T 514 847 1117 NEUFarchitectes.com

Seal

NEUF
ARCHITECT(E)S

Client

CLARIDGE HOMES

Project

110-116 YORK STREET

Location: OTTAWA
No.: 13098.00

NO	REVISION	DATE (yyyy.mm.dd)
E	FOR COORDINATION	2023.06.12
F	FOR CLIENT REVIEW	2023.06.15
G	FOR CLIENT REVIEW	2023.07.07
H	FOR HERITAGE DEMOLITION PERMIT	2023.09.18
J	FOR HERITAGE DEMOLITION PERMIT REVIEW	2023.09.28
K	FOR COORDINATION	2023.10.10
M	FOR COORDINATION	2023.12.04
Q	FOR COORDINATION	2024.05.02
V	FOR CLIENT REVIEW	2024.09.10
W	FOR SITE PLAN APPLICATION	2024.09.23
DD	FOR COORDINATION	2024.10.23
JJ	FOR COORDINATION	2024.11.15
LL	FOR COORDINATION	2024.11.22
MM	FOR SITE PLAN APPLICATION	2024.11.25
PP	FOR COORDINATION	2024.12.02
QQ	FOR CLIENT REVIEW	2024.12.04

Preliminary NOT FOR CONSTRUCTION

Drawn by: SJ
Checked by: LH
DATE (aa.mm.jj): MAY 2023
Scale: As indicated

Drawing Title

SITE PLAN

Revision: QQ
Dwg Number: A100

PC2024-0101

C:\Fichiers Revit Locaux\YORKST_13098_ARC_R22_sjoanis\U643X.rvt

APPENDIX B

TIA Screening Form

City of Ottawa 2017 TIA Guidelines TIA Screening

1. Description of Proposed Development

Municipal Address	110-116 York Street
Description of Location	SE corner of York Street and Dalhousie Street
Land Use Classification	Hotel (expansion)
Development Size (units)	154 rooms
Development Size square metre (m^2)	-
Number of Accesses and Locations	2 (George St, Dalhousie St)
Phase of Development	1
Buildout Year	2026

If available, please attach a sketch of the development or site plan to this form.

2. Trip Generation Trigger

Considering the Development's Land Use type and Size (as filled out in the previous section), please refer to the Trip Generation Trigger checks below.

Table notes:

1. Table 2, Table 3 & Table 4 TRANS Trip Generation Manual
2. Institute of Transportation Engineers (ITE) Trip Generation Manual 11.1 Ed.

Land Use Type	Minimum Development Size
Single-family homes	**60 units**
Multi-Use Family (Low-Rise)[1]	**90 units**
Multi-Use Family (High-Rise)[1]	**150 units**
Office[2]	**1,400 m^2**
Industrial[2]	**7,000 m^2**
Fast-food restaurant or coffee shop[2]	**110 m^2**
Destination retail[2]	**1,800 m^2**
Gas station or convenience market[2]	**90 m^2**

If the proposed development size is equal to or greater than the sizes identified above, the Trip Generation Trigger is satisfied.

3. Location Triggers

	Yes	No
Does the development propose a new driveway to a boundary street that is designated as part of the Transit Priority Network, Rapid Transit network or Cross-Town Bikeways?	☐	☑
Is the development in a Hub, a Protected Major Transit Station Area (PMTSA), or a Design Priority Area (DPA)?[2]	☑	☐

If any of the above questions were answered with 'Yes,' the Location Trigger is satisfied.

4. Safety Triggers

	Yes	No
Are posted speed limits on a boundary street are 80 kilometers per hour (km/h) or greater?	☐	☑
Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?	☐	☑
Is the proposed driveway within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 metre [m] of intersection in rural conditions, or within 150 m of intersection in urban/ suburban conditions)?	☑	☐
Is the proposed driveway within auxiliary lanes of an intersection?	☐	☑
Does the proposed driveway make use of an existing median break that serves an existing site?	☐	☑

[2] Hubs are identified in Schedules B1 to B8 of the City of Ottawa Official Plan. PMTSAs are identified in Schedule C1 of the Official Plan. DPAs are identified in Schedule C7A and C7B of the Official. See Chapter 4 for a list of City of Ottawa Planning and Engineering documents that support the completion of TIA.

	Yes	No
Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?	☐	☑
Does the development include a drive-thru facility?	☐	☑

If any of the above questions were answered with 'Yes,' the Safety Trigger is satisfied.

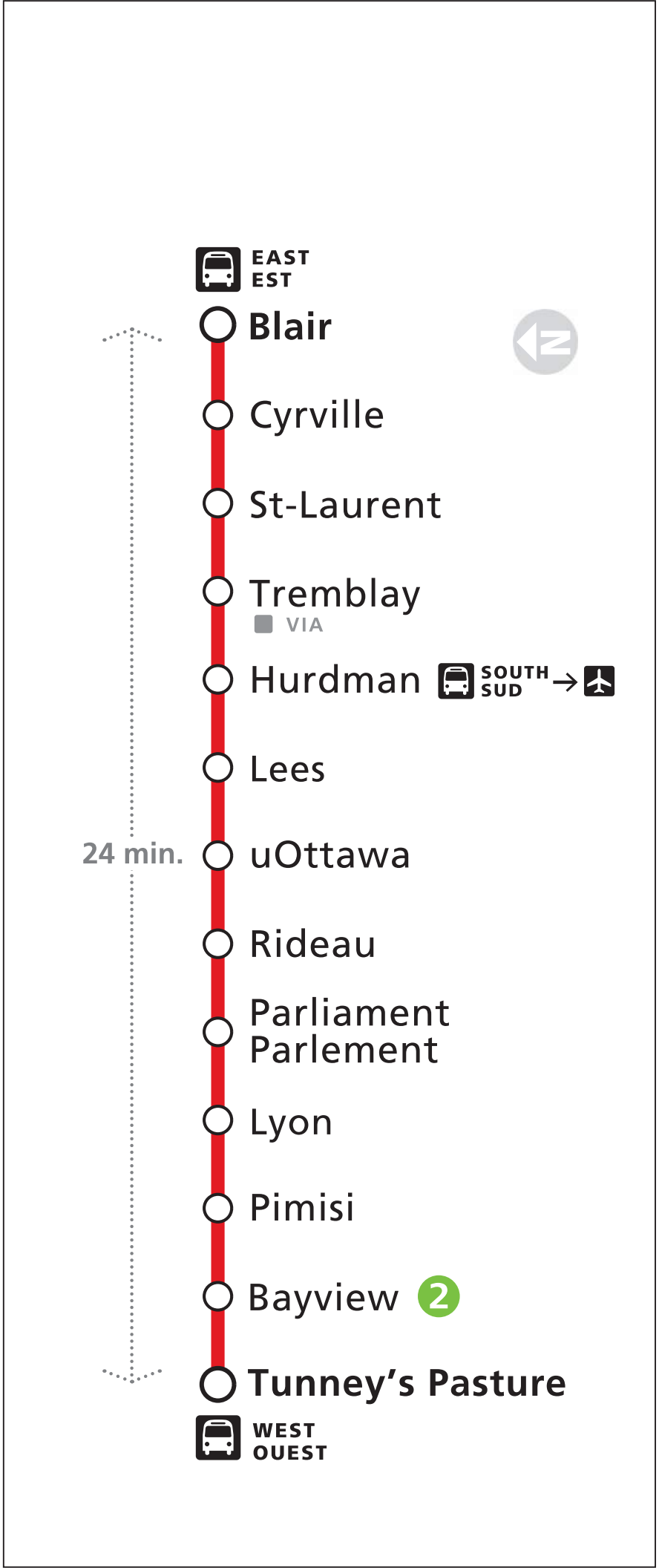
5. Summary

Results of Screening	Yes	No
Does the development satisfy the Trip Generation Trigger?	☑	☐
Does the development satisfy the Location Trigger?	☑	☐
Does the development satisfy the Safety Trigger?	☑	☐

If none of the triggers are satisfied, the TIA Study is complete. If one or more of the triggers is satisfied, the TIA Study must continue into the next stage (Screening and Scoping).

APPENDIX C

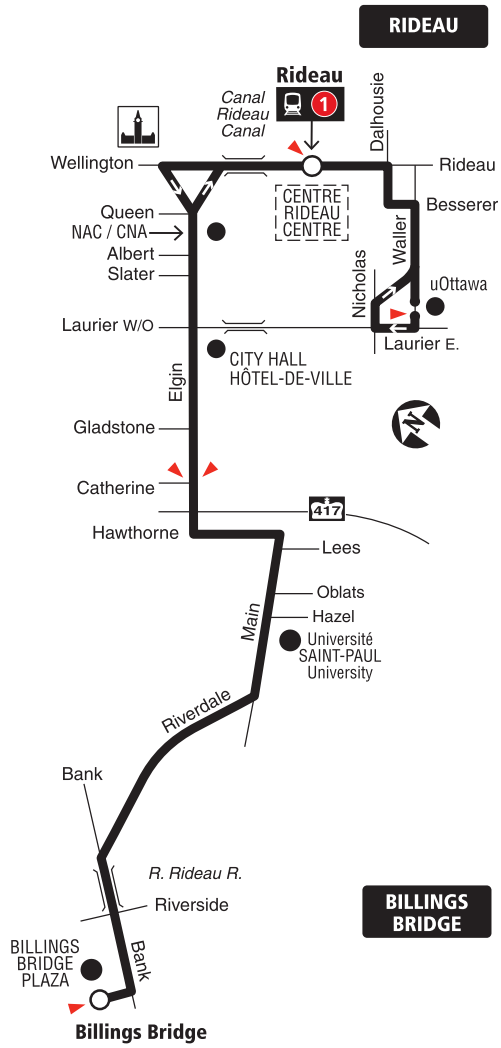
OC Transpo Route Maps


EAST
EST
Blair
Cyrville
St-Laurent
Tremblay
VIA
Hurdman
SOUTH
SUD
Lees
24 min.
uOttawa
Rideau
Parliament
Parlement
Lyon
Pimisi
Bayview
2
Tunney's Pasture
WEST
OUEST

5 BILLINGS BRIDGE / RIDEAU

Local

7 days a week / 7 jours par semaine
All day service
Service toute la journée



Station

Timepoint / Heures de passage

08.2020

Schedule / Horaire 613-560-1000
Text / Texto* 560560
plus your four digit bus stop number / *plus* votre numéro d'arrêt à quatre chiffres
*Standard message rates may apply / Les tarifs réguliers de messagerie texte peuvent s'appliquer

Customer Service
Service à la clientèle **613-560-5000**
Lost and Found / Objets perdus..... **613-563-4011**
Security / Sécurité **613-741-2478**

Effective April 26, 2020
En vigueur 26 avril 2020

OC Transpo
INFO 613-560-5000
octranspo.com

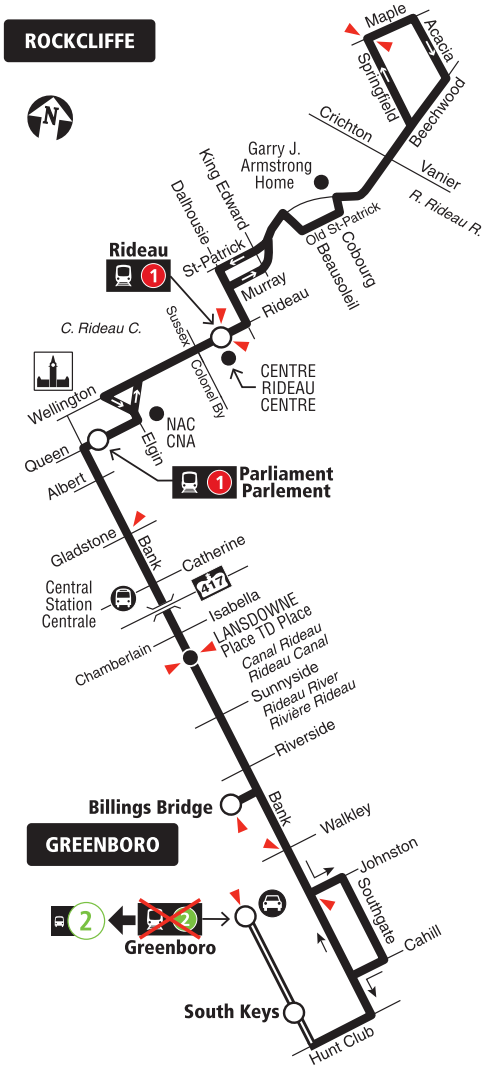
6 ROCKCLIFFE / GREENBORO

Fréquent

7 days a week / 7 jours par semaine

All day service

Service toute la journée



2023/09

Transitway & Station

Park & Ride / Parc-o-Bus

Timepoint / Heures de passage

2023.09

Schedule / Horaire 613-560-1000

Text / Texto* 560560

plus your four digit bus stop number / *plus* votre numéro d'arrêt à quatre chiffres

*Standard message rates may apply / Les tarifs réguliers de messagerie texte peuvent s'appliquer

Customer Service
Service à la clientèle **613-560-5000**

Lost and Found / Objets perdus..... **613-563-4011**

Security / Sécurité **613-741-2478**

Effective Fall 2020

En vigueur automne 2020

OC Transpo

INFO 613-560-5000
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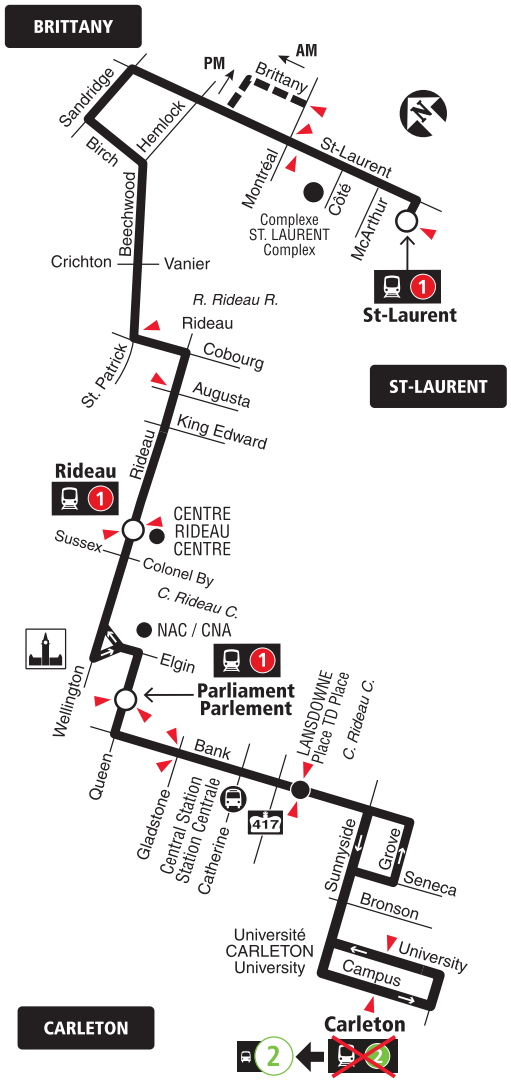
7 CARLETON / ST-LAURENT

Fréquent

7 days a week / 7 jours par semaine

All day service

Service toute la journée



2020.08

Schedule / Horaire 613-560-1000

Text / Texto* 560560

plus your four digit bus stop number / *plus* votre numéro d'arrêt à quatre chiffres

*Standard message rates may apply / Les tarifs réguliers de messagerie texte peuvent s'appliquer

Customer Service
Service à la clientèle **613-560-5000**

Lost and Found / Objets perdus..... **613-563-4011**

Security / Sécurité **613-741-2478**

Effective Fall 2020

En vigueur automne 2020

OC Transpo

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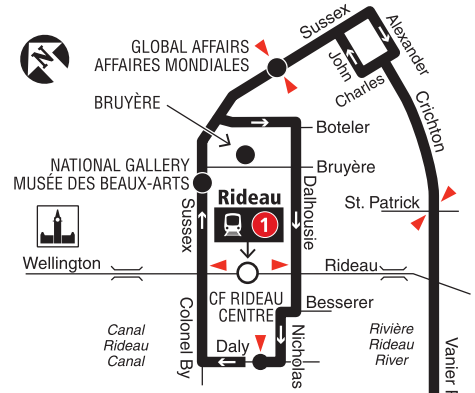
9 RIDEAU / HURDMAN

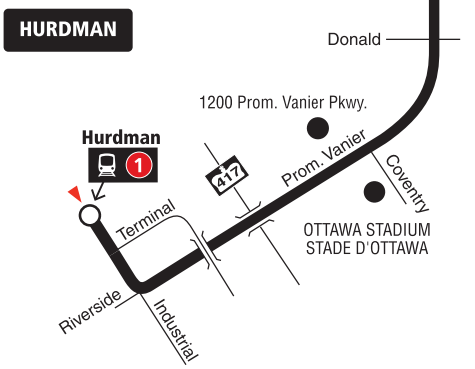
Local

7 days a week / 7 jours par semaine
All day service
Service toute la journée

RIDEAU



HURDMAN



○ Station

▲ Timepointe / Heures de passage

2020.04

Schedule / Horaire.....613-560-1000
Text / Texto 560560
plus your four digit bus stop number / *plus* votre numéro d'arrêt à quatre chiffres

Customer Service
Service à la clientèle **613-741-4390**
Lost and Found / Objets perdus..... **613-563-4011**
Security / Sécurité **613-741-2478**

Effective April 26, 2020
En vigueur 26 avril 2020

OC Transpo **INFO 613-741-4390**
octranspo.com

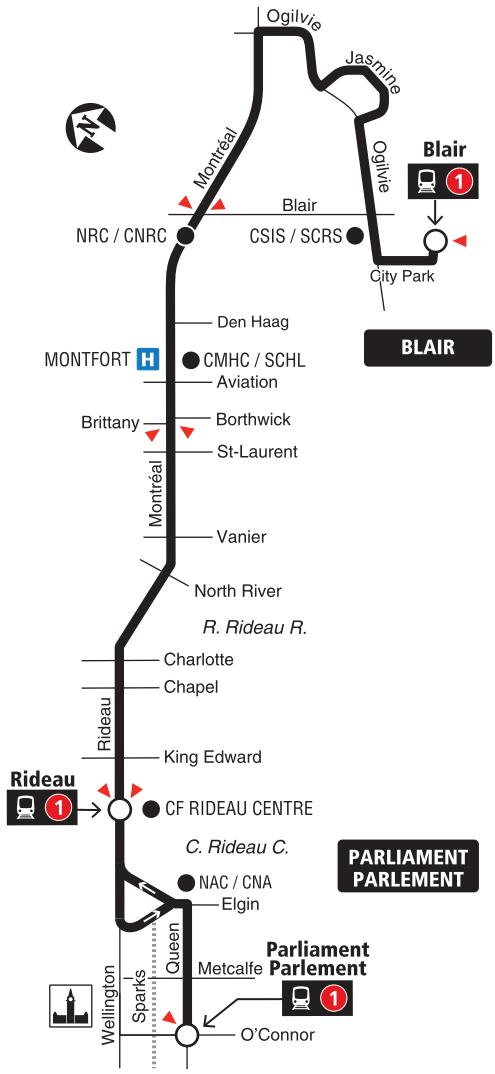
12 PARLIAMENT / PARLEMENT — BLAIR

Fréquent

7 days a week / 7 jours par semaine

All day service

Service toute la journée



04.2023

Station

Timepoint / Heures de passage

04.2023

Schedule / Horaire 613-560-1000

Text / Texto* 560560

plus your four digit bus stop number / *plus* votre numéro d'arrêt à quatre chiffres

*Standard message rates may apply / Les tarifs réguliers de messagerie texte peuvent s'appliquer

Customer Service
Service à la clientèle **613-560-5000**

Lost and Found / Objets perdus..... **613-563-4011**

Security / Sécurité **613-741-2478**

Effective April 23, 2023

En vigueur 23 avril 2023

OC Transpo

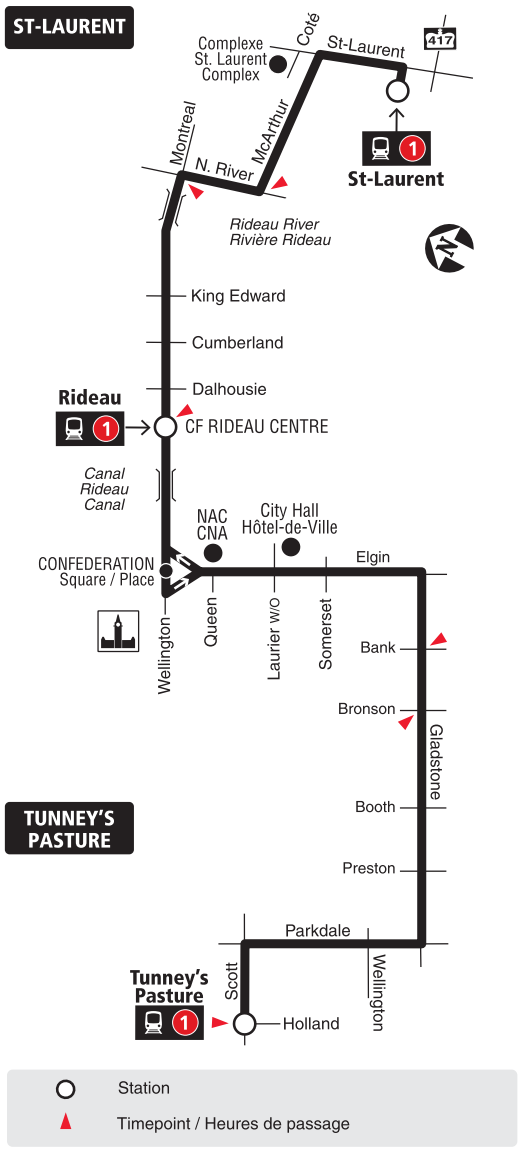
INFO 613-560-5000
octranspo.com

14 ST-LAURENT / TUNNEY'S PASTURE

Fréquent

7 days a week / 7 jours par semaine

All day service
Service toute la journée



2020.09

Schedule / Horaire.....613-560-1000
Text / Texto 560560
plus your four digit bus stop number / *plus* votre numéro d'arrêt à quatre chiffres

Customer Service
Service à la clientèle **613-741-4390**
Lost and Found / Objets perdus..... **613-563-4011**
Security / Sécurité **613-741-2478**

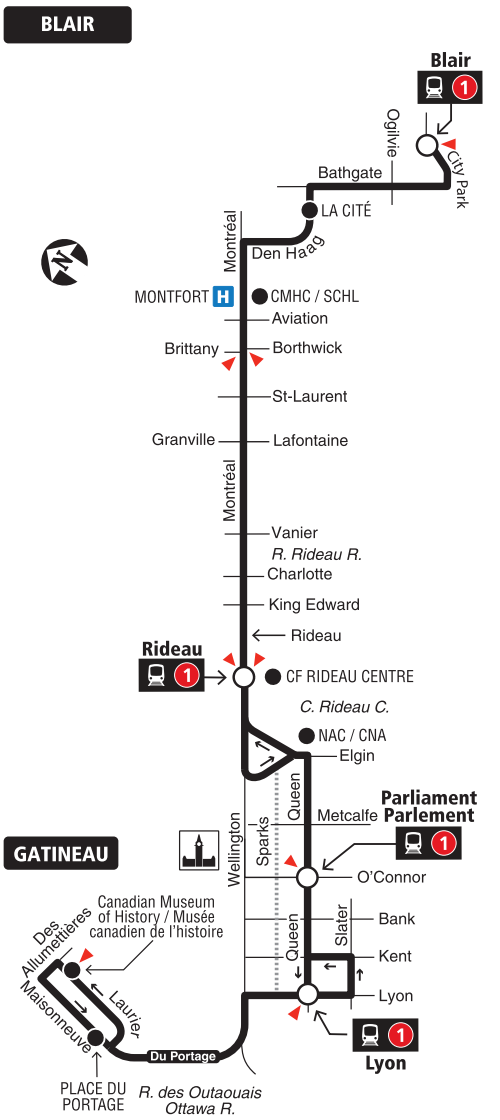
Fall 2020
Automne 2020

OC Transpo
INFO 613-741-4390
octranspo.com

15 GATINEAU / BLAIR

Local

Monday to Friday / Lundi au vendredi
Peak Periods
Périodes de pointe



04.2023

○ Station

▲ Timepoint / Heures de passage

04.2023

Schedule / Horaire 613-560-1000
Text / Texto* 560560
plus your four digit bus stop number / *plus* votre numéro d'arrêt à quatre chiffres
*Standard message rates may apply / Les tarifs réguliers de messagerie texte peuvent s'appliquer

Customer Service
Service à la clientèle **613-560-5000**
Lost and Found / Objets perdus..... **613-563-4011**
Security / Sécurité..... **613-741-2478**

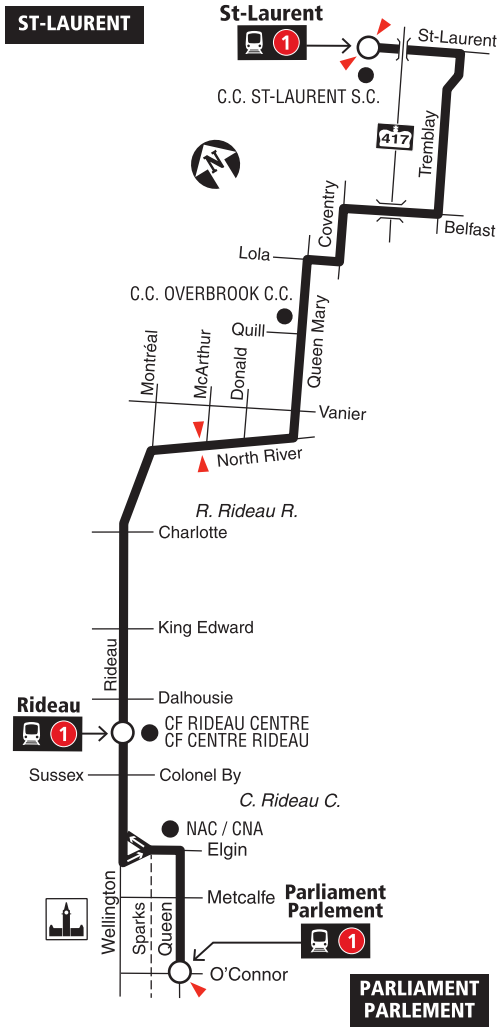
Effective April 23, 2023
En vigueur 23 avril 2023

OC Transpo
INFO 613-560-5000
octranspo.com

18 ST-LAURENT / PARLIAMENT PARLEMENT

Local

7 days a week / 7 jours par semaine
All day service
Service toute la journée



2023.08

Station

Timepoint / Heures de passage

2023.08

Schedule / Horaire 613-560-1000
Text / Texto* 560560
plus your four digit bus stop number / *plus* votre numéro d'arrêt à quatre chiffres
*Standard message rates may apply / Les tarifs réguliers de messagerie texte peuvent s'appliquer

Customer Service
Service à la clientèle **613-560-5000**
Lost and Found / Objets perdus **613-563-4011**
Security / Sécurité **613-741-2478**

Effective August 27, 2023
En vigueur 27 août 2023

OC Transpo
INFO 613-560-5000
octranspo.com

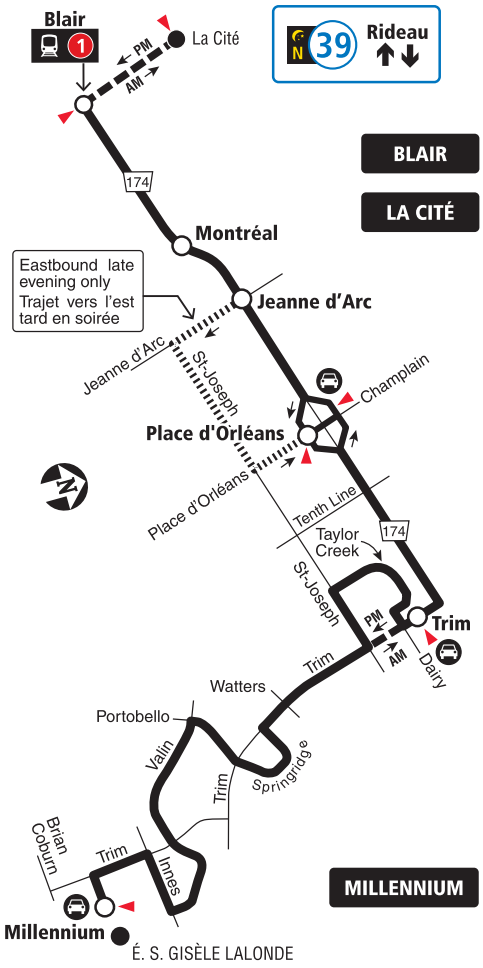
39 Rapide

MILLENNIUM

BLAIR
LA CITÉ

7 days a week / 7 jours par semaine

All day service and limited overnight
Service toute la journée et limité la nuit



Station

Peak periods / Périodes de pointe

Park & Ride / Parc-o-bus

Timepoint / Heures de passage

39 When O-Train Line 1 is not running overnight, Route 39 will be extended downtown to Rideau Station. / Lorsque la ligne 1 de l'O-Train ne circule pas la nuit, le circuit 39 sera prolongée au centre-ville jusqu'à la station Rideau.

2019.07

1

Future route after O-Train Line 1 is open
Trajet du circuit après l'ouverture de la Ligne 1 de l'O-Train

Lost and Found / Objets perdus..... **613-563-4011**
Security / Sécurité..... **613-741-2478**

OC Transpo **INFO 613-741-4390**
octranspo.com

45 Rapide

HOSPITAL / HÔPITAL — HURDMAN

7 days a week / 7 jours par semaine

All day and limited overnight service
Service toute la journée et limité la nuit

Transitway & Station

Timepointe / Heures de passage

When O-Train Line 1 is not running overnight, Route 45 will be extended downtown to Rideau Station. / Lorsque la ligne 1 de l'O-Train ne circule pas la nuit, le circuit 45 sera prolongée au centre-ville jusqu'à la station Rideau.

2019.07

1

Future route after O-Train Line 1 is open
Trajet du circuit après l'ouverture de la Ligne 1 de l'O-Train

Lost and Found / Objets perdus..... **613-563-4011**
Security / Sécurité..... **613-741-2478**

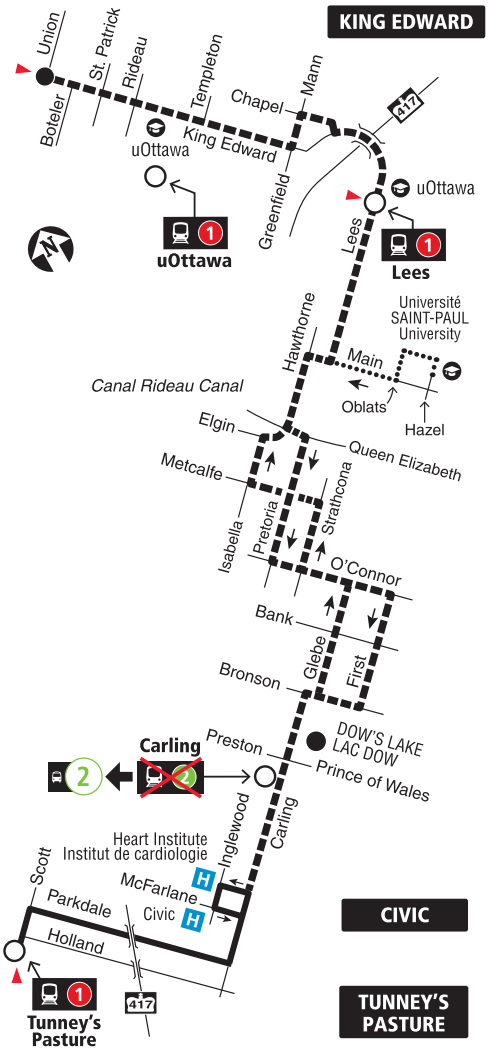
OC Transpo
INFO 613-741-4390
octranspo.com

56

CIVIC
KING EDWARD
TUNNEY'S PASTURE

Local

7 days a week / 7 jours par semaine



Station

7 days a week / 7 jours par semaine

Monday to Friday only (Peak periods)
Lundi au vendredi seulement (Périodes de pointe)

Some trips / Quelques trajets

Timepoint / Heures de passage

2021.06

Schedule / Horaire 613-560-1000
Text / Texto* 560560
plus your four digit bus stop number / *plus* votre numéro d'arrêt à quatre chiffres
*Standard message rates may apply / Les tarifs réguliers de messagerie texte peuvent s'appliquer

Customer Service
Service à la clientèle **613-741-4390**

Lost and Found / Objets perdus..... **613-563-4011**

Security / Sécurité **613-741-2478**

Effective June 20, 2021
En vigueur 20 juin 2021

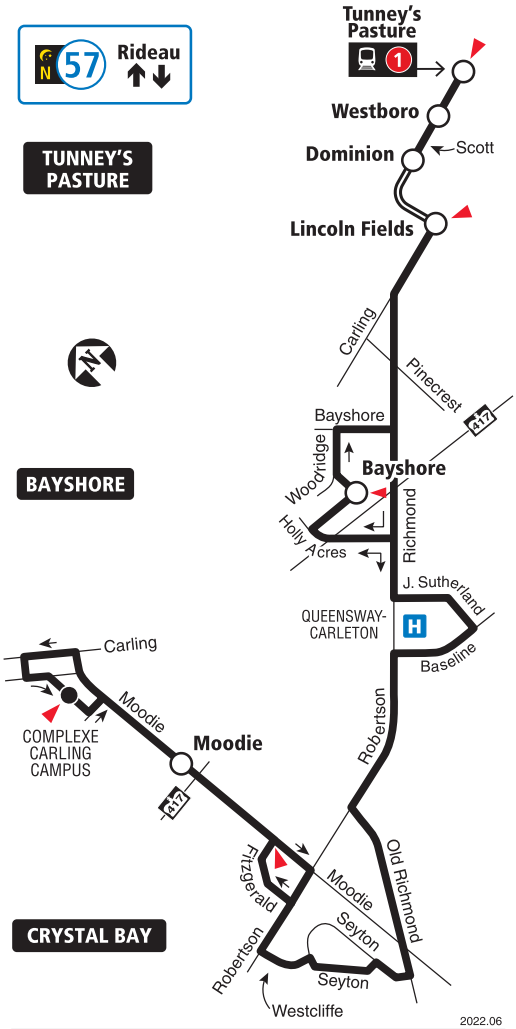
OC Transpo
INFO 613-741-4390
octranspo.com

57 Rapide

BAYSHORE
CRYSTAL BAY
TUNNEY'S PASTURE

7 days a week / 7 jours par semaine

All day and limited overnight service
Service toute la journée et limité la nuit



2022.06

Transitway & Station

Timepoint | Heures de passage

57 When O-Train Line 1 is not running overnight, Route 57 will be extended downtown to Rideau Station. / Lorsque la Ligne 1 de l'O-Train ne circule pas la nuit, le circuit 57 sera prolongée au centre-ville jusqu'à la station Rideau.

2022.06

Schedule / Horaire 613-560-1000
Text / Texto*.....560560
plus your four digit bus stop number / *plus* votre numéro d'arrêt à quatre chiffres
*Standard message rates may apply / Les tarifs réguliers de messagerie texte peuvent s'appliquer

Customer Service
Service à la clientèle **613-560-5000**
Lost and Found / Objets perdus..... **613-563-4011**
Security / Sécurité **613-741-2478**

Effective June 26, 2022
En vigueur 26 juin 2022

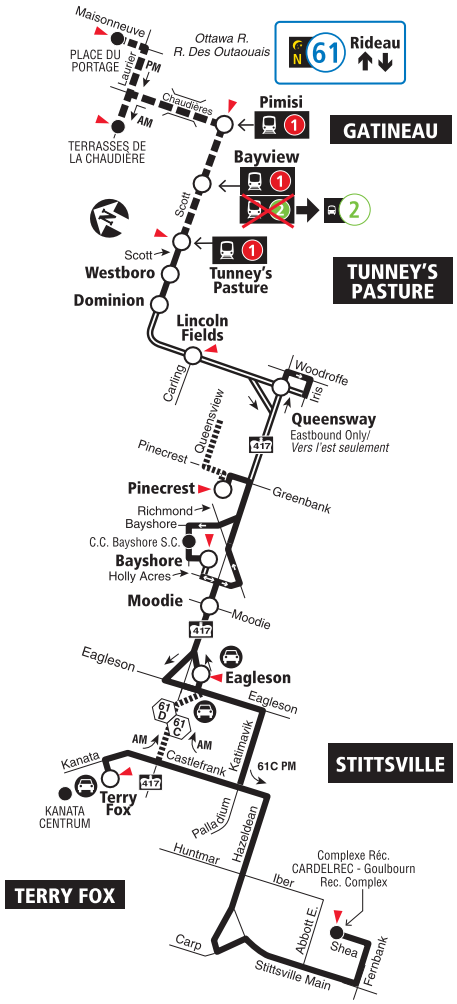
OC Transpo
INFO 613-560-5000
octranspo.com

61 Rapide

TERRY FOX STITTSVILLE
TUNNEY'S PASTURE GATINEAU

7 days a week / 7 jours par semaine

All day service and limited overnight
Service toute la journée et limité la nuit



Transitway & Station
Peak trips / Trajets de pointe
Selected time periods / Périodes sélectionnées
Park & Ride / Parc-o-bus
Timepoint / Heures de passage

2022.06

61 When O-Train Line 1 is not running overnight, Route 61 will be extended downtown to Rideau Station. / Lorsque la Ligne 1 de l'O-Train ne circule pas la nuit, le circuit 61 sera prolongée au centre-ville jusqu'à la station Rideau.

2022.06

Schedule / Horaire 613-560-1000
Text / Texto* 560560
plus your four digit bus stop number / *plus* votre numéro d'arrêt à quatre chiffres
*Standard message rates may apply / Les tarifs réguliers de messagerie texte peuvent s'appliquer

Customer Service
Service à la clientèle **613-560-5000**
Lost and Found / Objets perdus **613-563-4011**
Security / Sécurité **613-741-2478**

Effective June 26, 2022
En vigueur 26 juin 2022

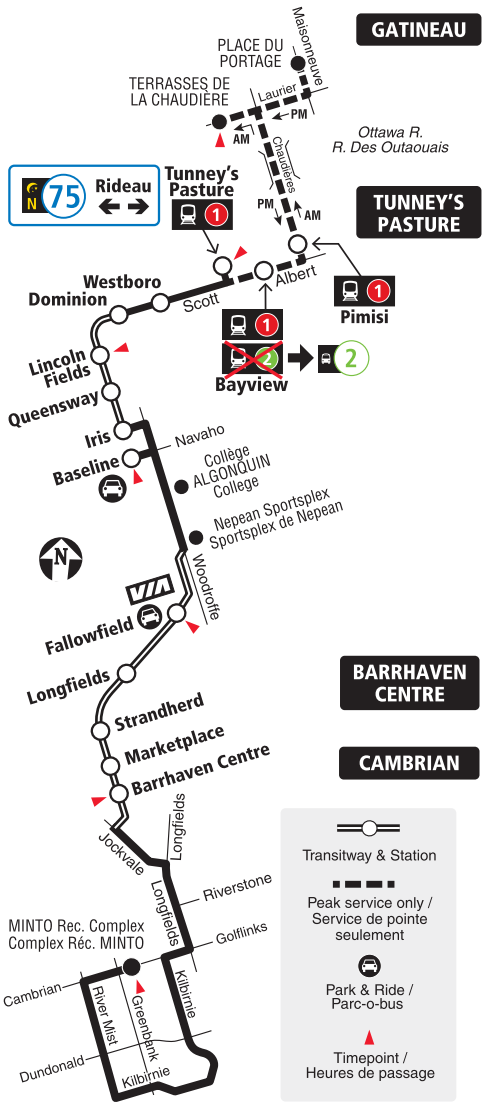
OC Transpo
INFO 613-560-5000
octranspo.com

75 Rapid

CAMBRIAN BARRHAVEN C.
TUNNEY'S PASTURE GATINEAU

7 days a week / 7 jours par semaine

All day service and limited overnight
Service toute la journée et limité la nuit



2022.06

When O-Train Line 1 is not running overnight, Route 75 will be extended downtown to Rideau Station. / Lorsque la Ligne 1 de l'O-Train ne circule pas la nuit, le circuit 75 sera prolongée au centre-ville jusqu'à la station Rideau.

2022.06

Schedule / Horaire 613-560-1000
Text / Texto* 560560
plus your four digit bus stop number / *plus* votre numéro d'arrêt à quatre chiffres
*Standard message rates may apply / Les tarifs réguliers de messagerie texte peuvent s'appliquer

Customer Service
Service à la clientèle **613-560-5000**
Lost and Found / Objets perdus..... **613-563-4011**
Security / Sécurité **613-741-2478**

Effective June 26, 2022
En vigueur 26 juin 2022

OC Transpo
INFO 613-560-5000
octranspo.com

97 Rapide

AIRPORT / AÉROPORT
HURDMAN

7 days a week / 7 jours par semaine

All day service and limited overnight
Service toute la journée et limité la nuit

Transitway & Station

Park & Ride / Parc-o-bus

Timepoint / Heures de passage

When O-Train Line 1 is not running overnight, Route 97 will be extended downtown to Rideau Station. / Lorsque la ligne 1 de l'O-Train ne circule pas la nuit, le circuit 97 sera prolongée au centre-ville jusqu'à la station Rideau.

2020.04

Schedule / Horaire.....613-560-1000
Text / Texto 560560
plus your four digit bus stop number / *plus* votre numéro d'arrêt à quatre chiffres

Customer Service
Service à la clientèle **613-741-4390**

Lost and Found / Objets perdus..... **613-563-4011**

Security / Sécurité..... **613-741-2478**

Effective May 3, 2020
En vigueur 3 mai 2020

OC Transpo **INFO 613-741-4390**
octranspo.com

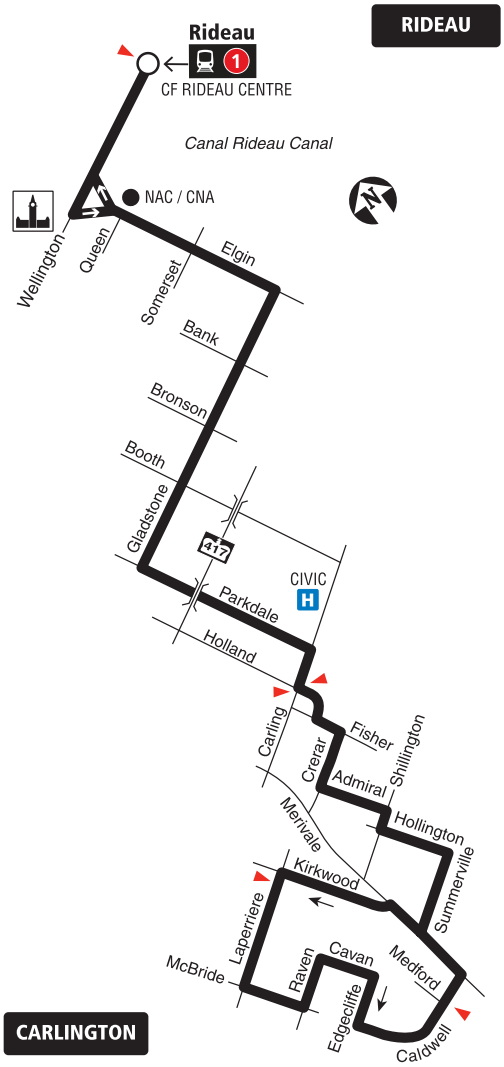
114 CARLINGTON RIDEAU

Local

Monday to Friday / Lundi au vendredi

Selected trips only

Trajets sélectionnés seulement



Station

Timepoint / Heures de passage

2020.08

Schedule / Horaire.....613-560-1000

Text / Texto 560560

plus your four digit bus stop number / *plus* votre numéro d'arrêt à quatre chiffres

Customer Service
Service à la clientèle **613-560-5000**

Lost and Found / Objets perdus..... **613-563-4011**

Security / Sécurité..... **613-741-2478**

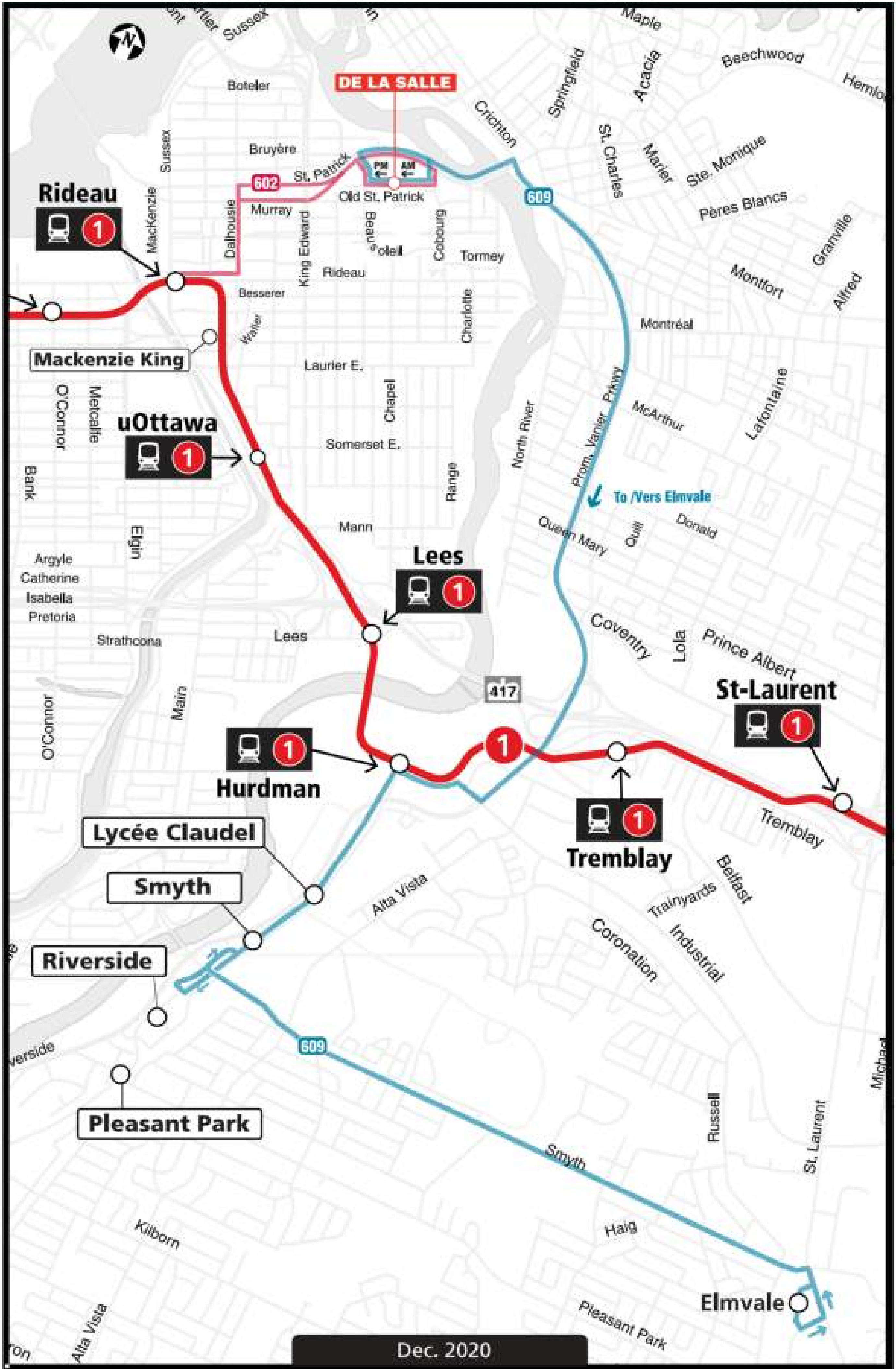
Effective Fall 2020

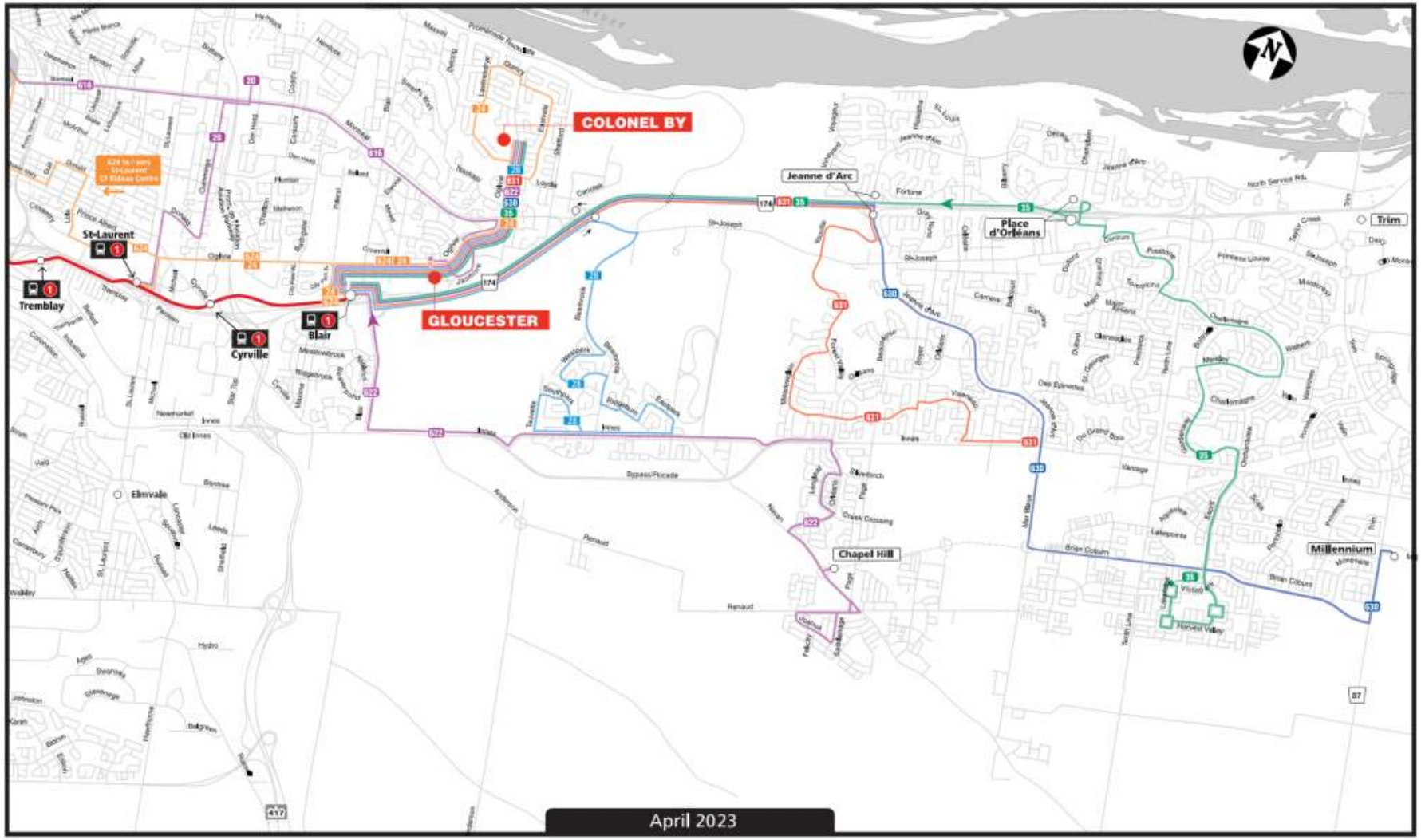
En vigueur automne 2020

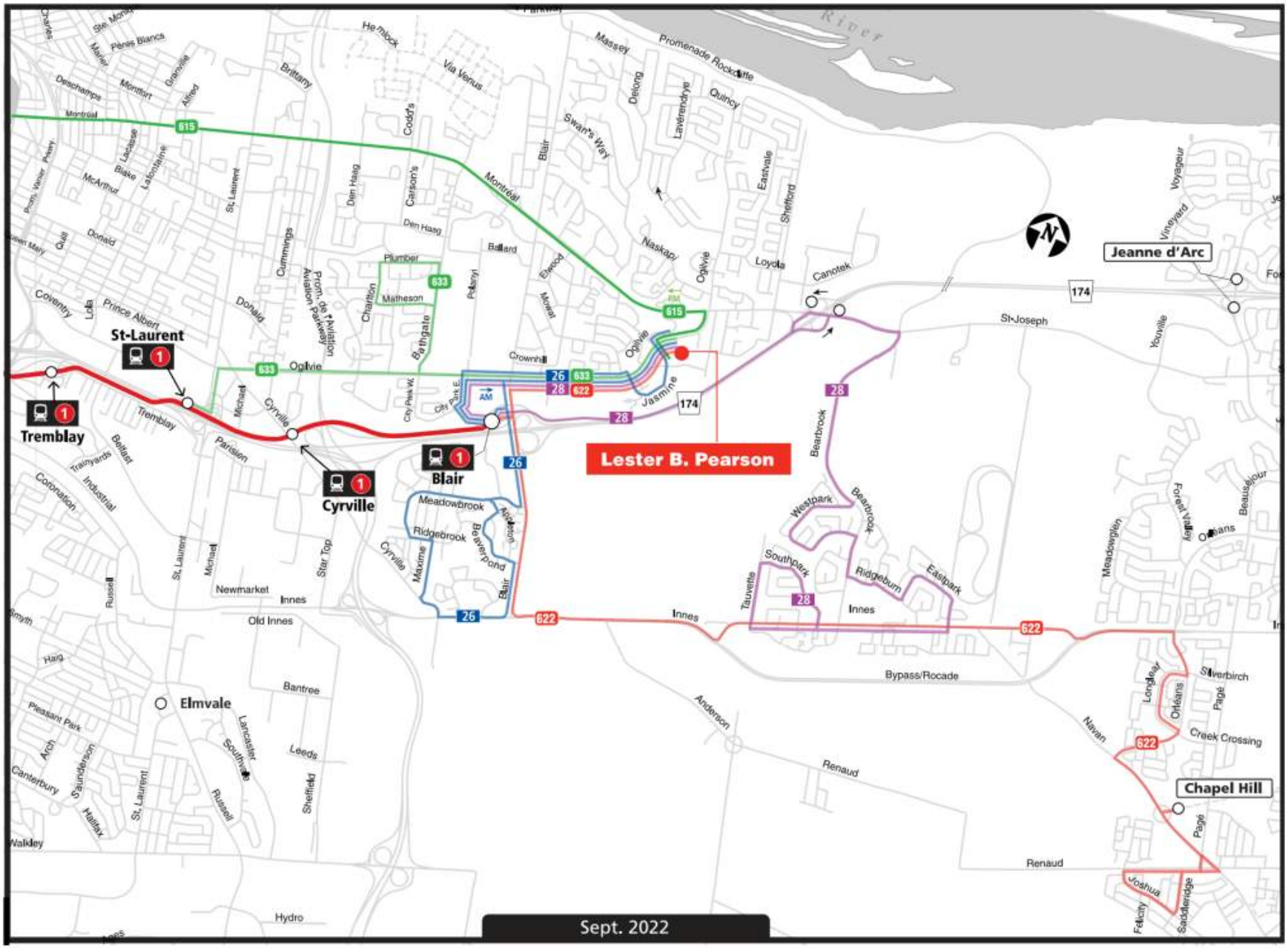
OC Transpo

INFO 613-560-5000

octranspo.com


DE LA SALLE
PM
AM
602
609
Rideau
1
Mackenzie King
uOttawa
Lees
Hurdman
Lycée Claudel
Smyth
Riverside
Pleasant Park
Tremblay
St-Laurent
Elmvale
To /Vers Elmvale
417
Sussex
Maple
Beechwood
Boteler
Bruyère
St. Patrick
Old St. Patrick
Murray
Dalhousie
MacKenzie
King Edward
Beausoleil
Cobourg
Tormey
Rideau
Besserer
Waller
Charlotte
Laurier E.
Chapel
Somerset E.
Range
Mann
Crichton
Springfield
Acacia
St. Charles
Marier
Ste. Monique
Pères Blancs
Granville
Montfort
Alfred
Montréal
Prom. Vanier Pkwy
McArthur
Lafontaine
North River
Queen Mary
Quill
Donald
Coventry
Lola
Prince Albert
O'Connor
Metcalfe
Bank
Elgin
Argyle
Catherine
Isabella
Pretoria
Strathcona
Lees
Main
Alta Vista
Belfast
Trainyards
Coronation
Industrial
Russell
St. Laurent
Smyth
Haig
Kilborn
Pleasant Park
Dec. 2020


COLONEL BY
GLOUCESTER
Jeanne d'Arc
Place d'Orléans
St-Laurent
Tremblay
Cyrville
Blair
Chapel Hill
Millennium
Trim
Elmvale
April 2023


St-Laurent
Tremblay
Cyrville
Blair
Lester B. Pearson
Jeanne d'Arc
Chapel Hill
Elmvale
Sept. 2022


SITE
Rideau
uOttawa
Global Affairs Canada
Affaires mondiales Canada
Pointe Nepean Point
Royal Canadian Mint
Élisabeth-Bruyère
Bruyère
Sussex
Dalhousie
Major's Hill
Mackenzie
ByWard Market
Marché By
St-Patrick
Murray
Boteler
King Edward
Rivière Rideau River
Stanley
Garry J. Armstrong Home
Foyer Garry J. Armstrong
Bordeleau
De La Salle
Old St-Patrick
Beausoleil
Tormey
Cumberland
Crichton
Sparks
CF Rideau Centre
NAC
CNA
Shaw Centre
Centre Shaw
Waller
Besserer
Daly
Chapel
Cobourg
Charlotte
Mackenzie King
Confederation
Confédération
STO
Laurier E.
Somerset E.
City Hall
Hôtel de ville
Lisgar
Elgin
Colonel By
Nicholas
University of Ottawa
Université d'Ottawa
Strathcona
North River
Range
Mann
Metcalfe

APPENDIX D

Traffic Count Data

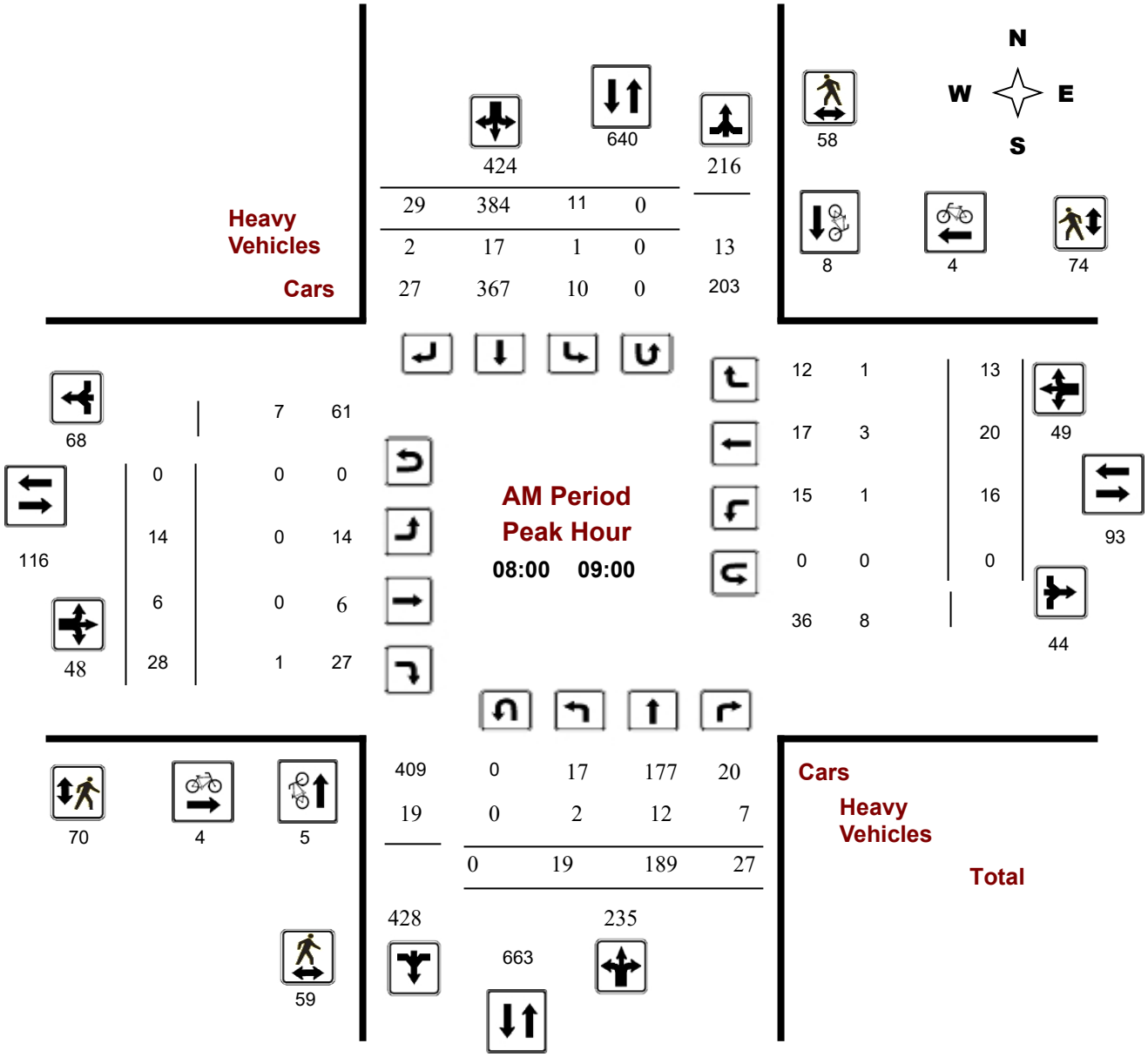
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

DALHOUSIE ST @ YORK ST

Survey Date: Tuesday, August 23, 2022 **WO No:** 40517

Start Time: 07:00 **Device:** Miovision



Comments

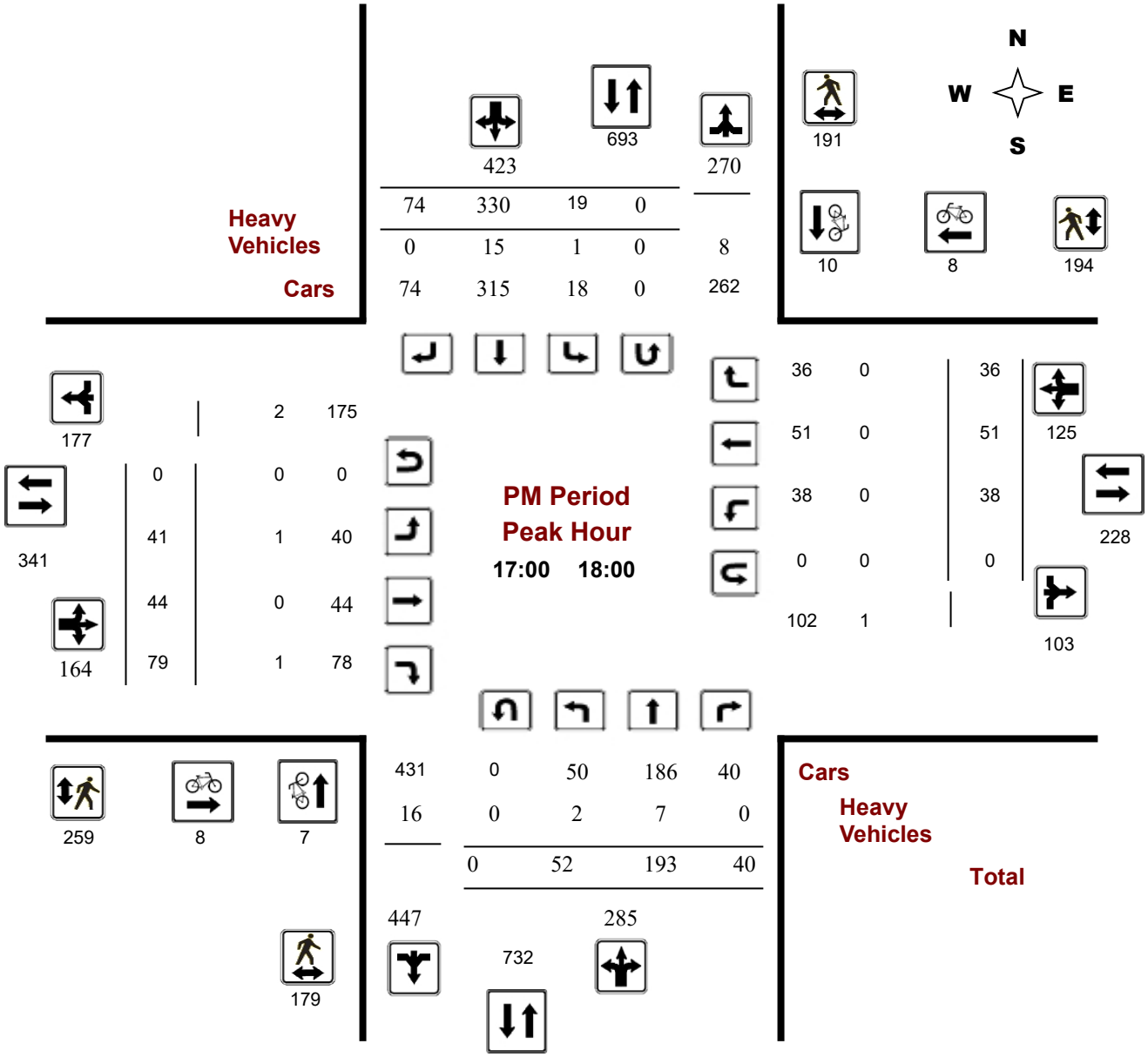
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

DALHOUSIE ST @ YORK ST

Survey Date: Tuesday, August 23, 2022
Start Time: 07:00

WO No: 40517
Device: Miovision



Comments

Transportation Services - Traffic Services

Turning Movement Count - Study Results

DALHOUSIE ST @ YORK ST

Survey Date: Tuesday, August 23, 2022 **WO No:** 40517

Start Time: 07:00 **Device:** Miovision

Full Study Summary (8 HR Standard)

Survey Date: Tuesday, August 23, 2022

Total Observed U-Turns

Northbound: 8 Southbound: 1

Eastbound: 1 Westbound: 2

AADT Factor

.90

	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	**NB TOT**	LT	ST	RT	**SB TOT**	**STR TOT**	LT	ST	RT	**EB TOT**	LT	ST	RT	**WB TOT**	**STR TOT**	**Grand Total**
07:00 08:00	19	180	13	**212**	15	384	19	**418**	**630**	7	5	23	**35**	23	8	9	**40**	**75**	**705**
08:00 09:00	19	189	27	**235**	11	384	29	**424**	**659**	14	6	28	**48**	16	20	13	**49**	**97**	**756**
09:00 10:00	19	151	10	**180**	5	327	31	**363**	**543**	13	13	28	**54**	27	31	19	**77**	**131**	**674**
11:30 12:30	37	151	20	**208**	14	321	61	**396**	**604**	39	39	53	**131**	29	50	26	**105**	**236**	**840**
12:30 13:30	46	162	28	**236**	23	298	64	**385**	**621**	43	31	61	**135**	25	64	37	**126**	**261**	**882**
15:00 16:00	37	215	19	**271**	11	333	51	**395**	**666**	31	37	66	**134**	27	49	19	**95**	**229**	**895**
16:00 17:00	35	180	26	**241**	15	322	44	**381**	**622**	38	46	73	**157**	39	44	23	**106**	**263**	**885**
17:00 18:00	52	193	40	**285**	19	330	74	**423**	**708**	41	44	79	**164**	38	51	36	**125**	**289**	**997**
Sub Total	264	1421	183	**1868**	113	2699	373	**3185**	**5053**	226	221	411	**858**	224	317	182	**723**	**1581**	**6634**
U Turns				**8**				**1**	**9**				**1**				**2**	**3**	**12**
Total	264	1421	183	**1876**	113	2699	373	**3186**	**5062**	226	221	411	**859**	224	317	182	**725**	**1584**	**6646**
EQ 12Hr	367	1975	254	**2608**	157	3752	518	**4429**	**7036**	314	307	571	**1194**	311	441	253	**1008**	**2202**	**9238**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	330	1778	229	**2347**	141	4423	611	**3986**	**6332**	283	276	514	**1075**	280	397	228	**907**	**1982**	**8314**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**.90**					
AVG 24Hr	432	2329	300	**3075**	185	5794	800	**5222**	**8295**	371	362	673	**1408**	367	520	299	**1188**	**2596**	**10891**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.														**1.31**					

Note: U-Turns provided for approach totals. Refer to 'U-Turn' Report for specific breakdown.

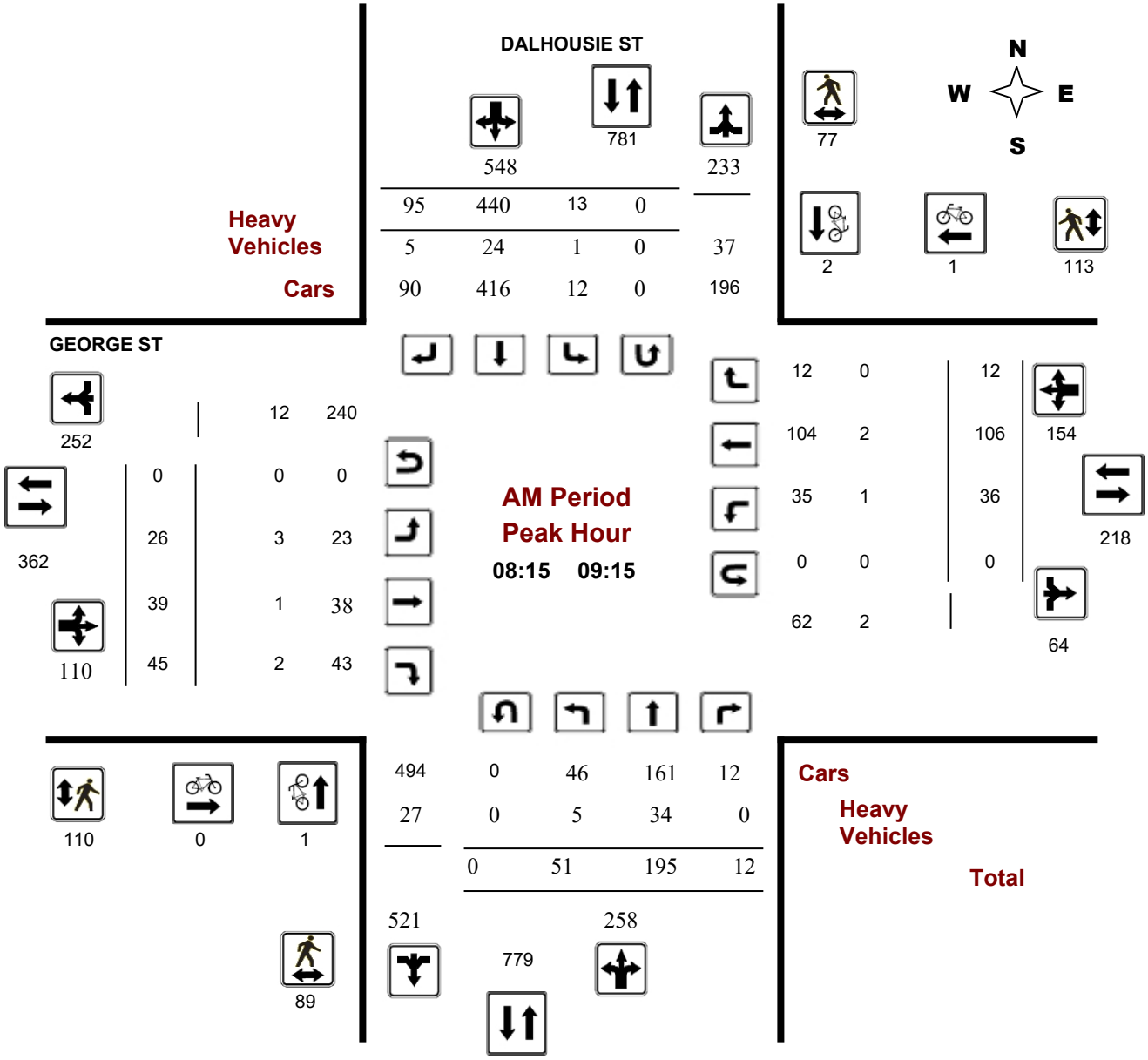
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

GEORGE ST @ DALHOUSIE ST

Survey Date: Thursday, March 21, 2019 **WO No:** 38458

Start Time: 07:00 **Device:** Miovision



Comments

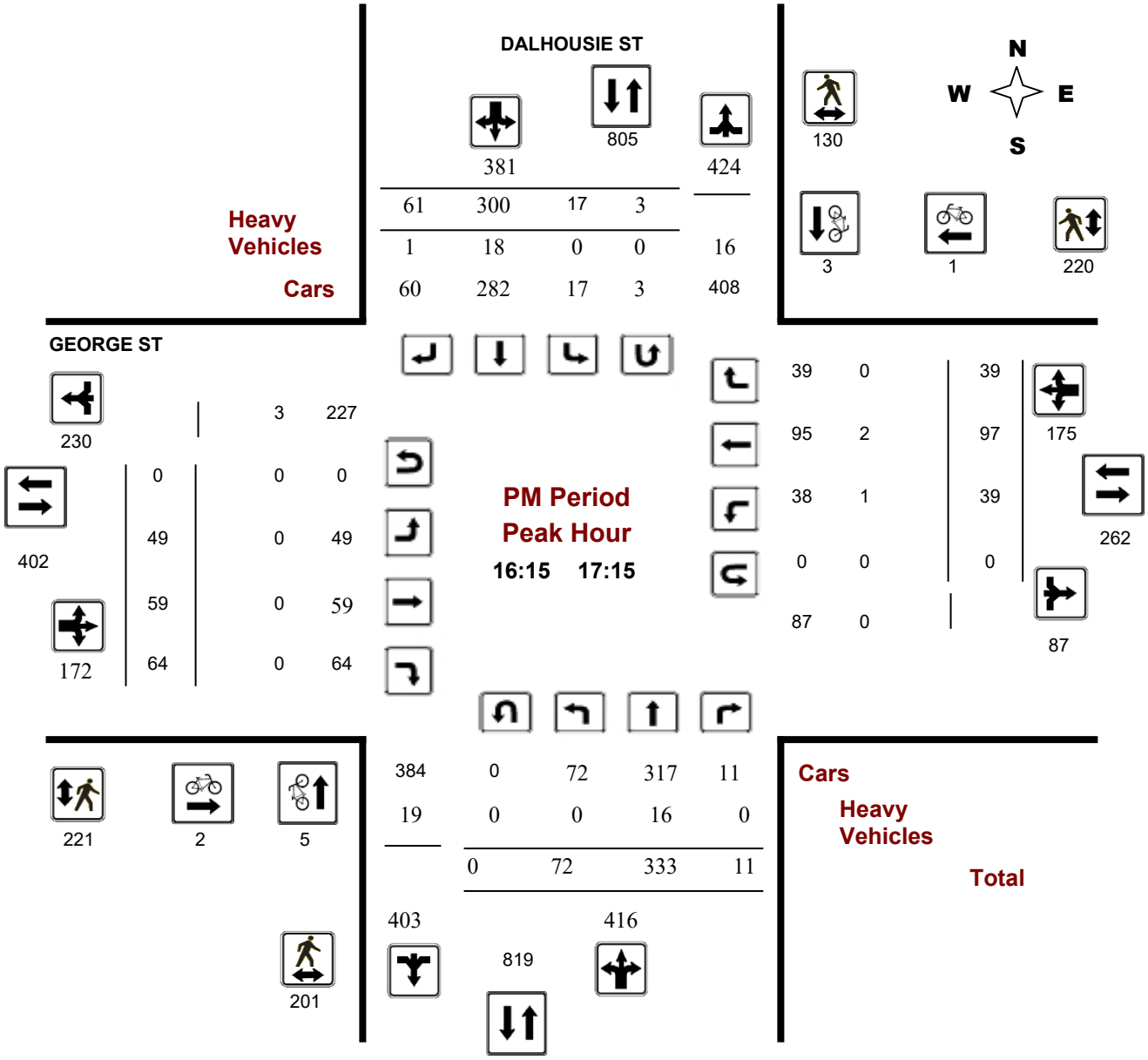
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

GEORGE ST @ DALHOUSIE ST

Survey Date: Thursday, March 21, 2019 **WO No:** 38458

Start Time: 07:00 **Device:** Miovision



Comments

Transportation Services - Traffic Services

Turning Movement Count - Study Results

GEORGE ST @ DALHOUSIE ST

Survey Date: Thursday, March 21, 2019 **WO No:** 38458

Start Time: 07:00 **Device:** Miovision

Full Study Summary (8 HR Standard)

Survey Date: Thursday, March 21, 2019

Total Observed U-Turns

Northbound: 2 Southbound: 5

Eastbound: 2 Westbound: 1

AADT Factor

1.00

	DALHOUSIE ST								GEORGE ST									
	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	LT	ST	RT	WB TOT	STR TOT	Grand Total
07:00 08:00	29	148	9	**186**	11	485	66	**562**	**748**	22	50	50	**122**	26	77	16	**119**	**241**	**989**
08:00 09:00	49	177	11	**237**	9	471	90	**570**	**807**	23	31	44	**98**	37	105	13	**155**	**253**	**1060**
09:00 10:00	59	191	20	**270**	21	330	77	**428**	**698**	30	59	68	**157**	27	97	22	**146**	**303**	**1001**
11:30 12:30	48	187	12	**247**	14	298	76	**388**	**635**	22	62	86	**170**	30	76	21	**127**	**297**	**932**
12:30 13:30	66	155	18	**239**	21	280	79	**380**	**619**	31	57	59	**147**	33	71	26	**130**	**277**	**896**
15:00 16:00	57	236	10	**303**	17	295	80	**392**	**695**	31	67	68	**166**	26	102	32	**160**	**326**	**1021**
16:00 17:00	69	323	10	**402**	20	307	70	**397**	**799**	46	55	68	**169**	36	95	36	**167**	**336**	**1135**
17:00 18:00	99	260	16	**375**	18	307	71	**396**	**771**	58	58	69	**185**	33	110	37	**180**	**365**	**1136**
Sub Total	476	1677	106	**2259**	131	2773	609	**3513**	**5772**	263	439	512	**1214**	248	733	203	**1184**	**2398**	**8170**
U Turns				**2**				**5**	**7**				**2**				**1**	**3**	**10**
Total	476	1677	106	**2261**	131	2773	609	**3518**	**5779**	263	439	512	**1216**	248	733	203	**1185**	**2401**	**8180**
EQ 12Hr	662	2331	147	**3143**	182	3854	847	**4890**	**8033**	366	610	712	**1690**	345	1019	282	**1647**	**3337**	**11370**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	624	2197	139	**2962**	172	3633	798	**4609**	**8033**	345	575	671	**1593**	325	960	266	**1552**	**3337**	**11370**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**1**					
AVG 24Hr	817	2878	182	**3880**	225	4759	1045	**6037**	**9917**	451	753	879	**2087**	426	1258	348	**2034**	**4121**	**14038**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.														**1.31**					

Note: U-Turns provided for approach totals. Refer to 'U-Turn' Report for specific breakdown.

APPENDIX E

Collision Records

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2017 **To:** December 31, 2021

Location: DALHOUSIE ST @ YORK ST

Traffic Control: Traffic signal **Total Collisions:** 16

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Feb-19, Sun,11:48	Clear	SMV other	Non-fatal injury	Dry	West	Turning left	Pick-up truck	Pedestrian	1
2017-May-06, Sat,23:56	Rain	Sideswipe	P.D. only	Wet	North	Pulling away from shoulder or curb	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-May-24, Wed,00:13	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Sep-04, Mon,00:41	Clear	Turning movement	P.D. only	Dry	North	Making "U" turn	Unknown	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-May-18, Fri,01:33	Clear	Other	P.D. only	Dry	West	Going ahead	Pick-up truck	Other motor vehicle	0
					East	Stopped	Police vehicle	Other motor vehicle	
2018-May-19, Sat,22:29	Rain	Sideswipe	P.D. only	Wet	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Jul-14, Sat,02:41	Rain	SMV other	Non-fatal injury	Wet	North	Going ahead	Automobile, station wagon	Pedestrian	2
2018-Jul-14, Sat,19:15	Clear	Sideswipe	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Jul-19, Thu,14:59	Clear	Turning movement	Non-fatal injury	Dry	West	Turning left	Automobile, station wagon	Cyclist	0
					East	Going ahead	Bicycle	Other motor vehicle	
2018-Aug-21, Tue,22:29	Rain	Sideswipe	Non-fatal injury	Wet	East	Changing lanes	Automobile, station wagon	Cyclist	0
					East	Going ahead	Bicycle	Other motor vehicle	
2019-Jun-13, Thu,22:00	Clear	Other	P.D. only	Dry	South	Reversing	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Jun-11, Thu,02:39	Rain	SMV other	P.D. only	Wet	South	Going ahead	Police vehicle	Skidding/sliding	0
2021-Sep-21, Tue,09:03	Clear	Rear end	P.D. only	Dry	North	Turning right	Unknown	Other motor vehicle	0
					North	Turning right	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2017 **To:** December 31, 2021

Location: DALHOUSIE ST @ YORK ST

Traffic Control: Traffic signal **Total Collisions:** 16

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2021-Oct-01, Fri,18:50	Clear	Rear end	P.D. only	Dry	South	Turning right	Unknown	Other motor vehicle	0
					South	Stopped	Pick-up truck	Other motor vehicle	
2021-Dec-18, Sat,23:10	Clear	Rear end	P.D. only	Loose snow	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2021-Dec-22, Wed,16:21	Snow	SMV other	Non-fatal injury	Wet	East	Turning right	Automobile, station wagon	Pedestrian	1

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2017 **To:** December 31, 2021

Location: GEORGE ST @ DALHOUSIE ST

Traffic Control: Traffic signal **Total Collisions:** 26

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Feb-28, Tue,20:57	Clear	SMV other	Non-fatal injury	Dry	North	Turning left	Pick-up truck	Pedestrian	1
2017-May-12, Fri,17:41	Clear	Sideswipe	P.D. only	Dry	West	Unknown	Automobile, station wagon	Other motor vehicle	0
					West	Unknown	Automobile, station wagon	Other motor vehicle	
2017-Jun-16, Fri,12:53	Clear	Turning movement	P.D. only	Dry	North	Turning left	Bus (other)	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Jul-06, Thu,16:30	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Turning right	Automobile, station wagon	Other motor vehicle	
2017-Aug-12, Sat,06:35	Clear	Angle	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Sep-24, Sun,02:48	Clear	SMV other	Non-fatal injury	Dry	South	Turning right	Automobile, station wagon	Pedestrian	1
2017-Oct-30, Mon,13:39	Clear	Rear end	P.D. only	Dry	North	Changing lanes	Unknown	Other motor vehicle	0
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2017-Dec-23, Sat,08:20	Clear	Angle	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Jun-22, Fri,18:07	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Jul-07, Sat,11:36	Clear	Sideswipe	P.D. only	Dry	East	Overtaking	Automobile, station wagon	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	
2018-Jul-28, Sat,14:45	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Nov-18, Sun,17:11	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Unknown	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2018-Dec-13, Thu,06:16	Clear	SMV other	Non-fatal injury	Dry	East	Turning left	Automobile, station wagon	Pedestrian	1

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2017 **To:** December 31, 2021

Location: GEORGE ST @ DALHOUSIE ST

Traffic Control: Traffic signal **Total Collisions:** 26

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Jan-20, Sun,02:30	Snow	Turning movement	P.D. only	Loose snow	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Pick-up truck	Other motor vehicle	
2019-Mar-02, Sat,02:33	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-May-03, Fri,12:57	Clear	Sideswipe	P.D. only	Dry	North	Overtaking	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Delivery van	Other motor vehicle	
2019-Aug-03, Sat,11:00	Clear	Rear end	P.D. only	Dry	South	Unknown	Unknown	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Sep-07, Sat,22:20	Clear	Sideswipe	Non-fatal injury	Dry	South	Unknown	Unknown	Cyclist	0
					South	Going ahead	Bicycle	Other motor vehicle	
2019-Nov-03, Sun,00:28	Clear	Approaching	P.D. only	Wet	North	Unknown	Automobile, station wagon	Other motor vehicle	0
					South	Unknown	Automobile, station wagon	Other motor vehicle	
2019-Dec-13, Fri,10:10	Clear	Sideswipe	P.D. only	Dry	North	Pulling away from shoulder or curb	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Feb-18, Tue,07:53	Snow	Turning movement	P.D. only	Loose snow	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Apr-12, Sun,17:30	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2020-Jun-16, Tue,20:20	Clear	Turning movement	P.D. only	Dry	South	Making "U" turn	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2021-Mar-25, Thu,16:57	Clear	Rear end	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Slowing or stopping	Passenger van	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2017 **To:** December 31, 2021

Location: GEORGE ST @ DALHOUSIE ST

Traffic Control: Traffic signal **Total Collisions:** 26

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2021-Oct-10, Sun,14:34	Clear	Rear end	Non-fatal injury	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2021-Oct-29, Fri,14:33	Clear	Turning movement	P.D. only	Dry	West	Turning right	Pick-up truck	Other motor vehicle	0
					West	Turning right	Delivery van	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2017 **To:** December 31, 2021

Location: DALHOUSIE ST btwn YORK ST & GEORGE ST

Traffic Control: No control **Total Collisions:** 15

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Jun-26, Mon,00:00	Clear	SMV unattended vehicle	P.D. only	Dry	Unknown	Unknown	Unknown	Unattended vehicle	0
2017-Aug-03, Thu,17:50	Clear	Angle	P.D. only	Dry	East	Reversing	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Jan-28, Sun,00:00	Clear	SMV unattended vehicle	P.D. only	Dry	South	Reversing	Automobile, station wagon	Unattended vehicle	0
2018-Apr-20, Fri,23:00	Clear	Turning movement	P.D. only	Dry	South	Making "U" turn	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Aug-05, Sun,03:35	Clear	Sideswipe	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Passenger van	Other motor vehicle	
2018-Nov-20, Tue,08:48	Snow	SMV unattended vehicle	P.D. only	Loose snow	North	Going ahead	Municipal transit bus	Unattended vehicle	0
2019-Feb-16, Sat,12:50	Clear	Angle	P.D. only	Wet	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jun-10, Mon,12:32	Clear	Sideswipe	Non-fatal injury	Dry	North	Stopped	Pick-up truck	Cyclist	0
					North	Going ahead	Bicycle	Other motor vehicle	
					North	Going ahead	Intercity bus	Cyclist	
2019-Nov-01, Fri,00:00	Clear	SMV unattended vehicle	P.D. only	Dry	Unknown	Unknown	Unknown	Unattended vehicle	0
2019-Dec-22, Sun,02:28	Clear	Sideswipe	P.D. only	Dry	North	Merging	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jan-11, Sat,14:05	Rain	Angle	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Sep-23, Wed,13:10	Clear	Angle	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2021-Apr-14, Wed,12:30	Clear	SMV other	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other	0

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2017 **To:** December 31, 2021

Location: DALHOUSIE ST btwn YORK ST & GEORGE ST

Traffic Control: No control **Total Collisions:** 15

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2021-Apr-30, Fri,21:44	Clear	SMV other	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Curb	0
2021-Nov-12, Fri,22:36	Clear	SMV other	P.D. only	Dry	North	Reversing	Automobile, station wagon	Pole (sign, parking meter)	0

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2017 **To:** December 31, 2021

Location: GEORGE ST btwn DALHOUSIE ST & CUMBERLAND ST

Traffic Control: No control **Total Collisions:** 13

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Jan-29, Sun,04:44	Clear	SMV unattended vehicle	P.D. only	Wet	East	Going ahead	Automobile, station wagon	Unattended vehicle	0
2017-May-10, Wed,00:00	Clear	SMV unattended vehicle	P.D. only	Dry	Unknown	Reversing	Automobile, station wagon	Unattended vehicle	0
2017-May-28, Sun,03:50	Clear	Angle	P.D. only	Dry	South	Reversing	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Sep-30, Sat,02:25	Clear	Angle	P.D. only	Dry	North	Turning right	Unknown	Other motor vehicle	0
					West	Overtaking	Automobile, station wagon	Other motor vehicle	
2017-Oct-13, Fri,10:00	Clear	Sideswipe	Non-fatal injury	Dry	North	Unknown	Unknown	Cyclist	0
					North	Unknown	Bicycle	Other motor vehicle	
2017-Nov-14, Tue,09:53	Clear	Turning movement	P.D. only	Dry	East	Pulling away from shoulder or curb	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Truck - dump	Other motor vehicle	
2017-Dec-18, Mon,12:00	Snow	Sideswipe	P.D. only	Slush	West	Pulling away from shoulder or curb	Passenger van	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Nov-14, Wed,23:28	Clear	Sideswipe	P.D. only	Dry	West	Pulling away from shoulder or curb	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Dec-05, Wed,18:40	Clear	SMV unattended vehicle	P.D. only	Dry	South	Turning right	Automobile, station wagon	Unattended vehicle	0
2019-Jul-03, Wed,16:40	Clear	Sideswipe	P.D. only	Dry	East	Unknown	Unknown	Other motor vehicle	0
					East	Going ahead	Moped	Other motor vehicle	
2019-Oct-10, Thu,08:11	Clear	Sideswipe	P.D. only	Dry	West	Pulling away from shoulder or curb	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2017 **To:** December 31, 2021

Location: GEORGE ST btwn DALHOUSIE ST & CUMBERLAND ST

Traffic Control: No control **Total Collisions:** 13

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Nov-30, Sat,21:29	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Unknown	Automobile, station wagon	Other motor vehicle	
2021-Sep-12, Sun,13:30	Clear	Other	P.D. only	Dry	West	Reversing	Passenger van	Other motor vehicle	0
					West	Turning left	Automobile, station wagon	Other motor vehicle	

Location: YORK ST btwn DALHOUSIE ST & YORK ST EB/WB SPLIT

Traffic Control: No control **Total Collisions:** 3

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Feb-05, Sun,01:22	Clear	Sideswipe	P.D. only	Dry	East	Going ahead	Unknown	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Apr-16, Tue,11:11	Clear	SMV unattended vehicle	P.D. only	Dry	North	Reversing	Truck - closed	Unattended vehicle	0
2021-Sep-20, Mon,19:31	Clear	Other	P.D. only	Dry	West	Reversing	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Pick-up truck	Other motor vehicle	

Location: YORK ST EB btwn YORK ST WB & CUMBERLAND ST

Traffic Control: No control **Total Collisions:** 5

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Mar-15, Wed,10:29	Snow	SMV unattended vehicle	P.D. only	Loose snow	North	Reversing	Pick-up truck	Unattended vehicle	0
2018-Mar-07, Wed,20:49	Clear	SMV unattended vehicle	P.D. only	Wet	West	Reversing	Police vehicle	Unattended vehicle	0
2018-Mar-16, Fri,16:30	Clear	Angle	P.D. only	Dry	North	Reversing	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Jun-09, Sun,20:30	Clear	Turning movement	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Passenger van	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2017 **To:** December 31, 2021

Location: YORK ST EB btwn YORK ST WB & CUMBERLAND ST

Traffic Control: No control **Total Collisions:** 5

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2021-Aug-20, Fri,00:00	Clear	SMV unattended vehicle	P.D. only	Dry	Unknown	Unknown	Unknown	Unattended vehicle	0

Location: YORK ST WB btwn YORK ST EB & CUMBERLAND ST

Traffic Control: No control **Total Collisions:** 10

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Jan-23, Mon,20:30	Clear	SMV unattended vehicle	P.D. only	Dry	West	Unknown	Unknown	Unattended vehicle	0
2017-Jul-25, Tue,08:40	Rain	Angle	P.D. only	Wet	North	Reversing	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Pick-up truck	Other motor vehicle	
2018-Feb-14, Wed,13:30	Clear	SMV unattended vehicle	P.D. only	Wet	North	Reversing	Automobile, station wagon	Unattended vehicle	0
2018-Jul-06, Fri,00:23	Clear	Angle	P.D. only	Dry	West	Reversing	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Feb-08, Fri,15:00	Clear	Angle	P.D. only	Wet	North	Reversing	Delivery van	Other motor vehicle	0
					West	Stopped	Delivery van	Other motor vehicle	
2019-Aug-11, Sun,11:08	Clear	Other	Non-fatal injury	Dry	West	Turning left	Pick-up truck	Cyclist	0
					East	Turning left	Bicycle	Other motor vehicle	
2019-Oct-10, Thu,14:00	Clear	Sideswipe	P.D. only	Dry	West	Going ahead	Truck - tractor	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Oct-14, Wed,15:26	Clear	Other	P.D. only	Dry	East	Reversing	Pick-up truck	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
2021-Feb-02, Tue,15:58	Clear	SMV other	Non-fatal injury	Dry	North	Reversing	Pick-up truck	Pedestrian	1
2021-Jun-02, Wed,18:20	Clear	Other	P.D. only	Dry	South	Reversing	Unknown	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	

APPENDIX F

Excerpts of ByWard Market Public Realm and Bikeway Plans

ByWard Market—Somerset St E Neighbourhood Bikeway
Marché By—Parcours cyclable du secteur de la rue Somerset Est

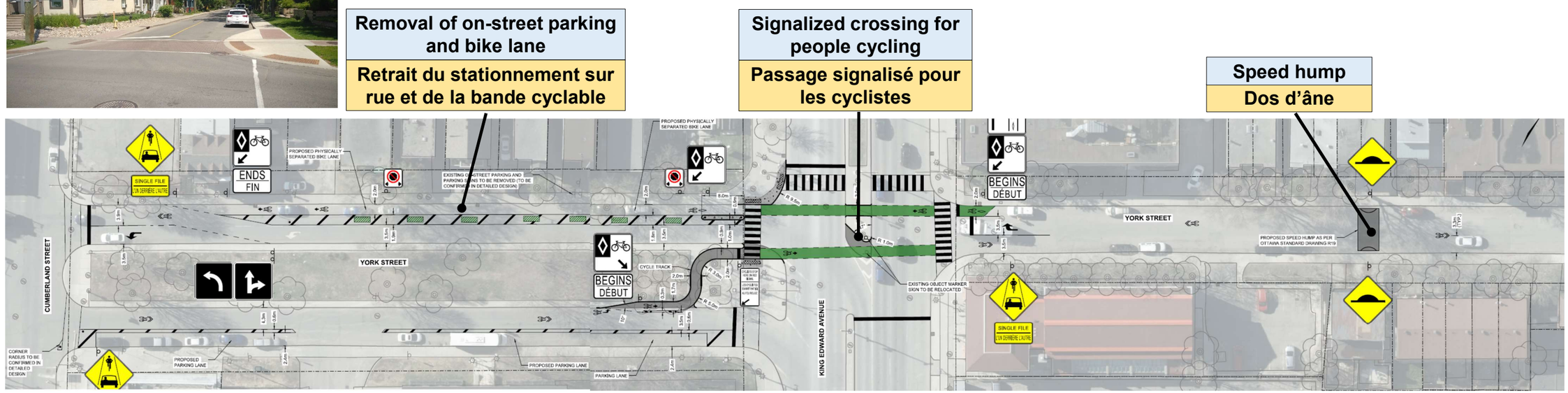
Proposed Enhancements

- Signalized crossing of King Edward Ave at York St for people cycling in both directions
- Traffic calming measures on York St east of Cumberland St and Beausoleil Dr between York St and Chapel St
  - Speed humps
  - Raised crossing at York St and Nelson St
  - Bulb-outs
- Westbound bike lane
  - York St west of King Edward Ave
  - Beausoleil Dr west of Chapel St
- Improved intersection for people cycling to/from pathway at Beausoleil Dr and Chapel St
- Wayfinding for people cycling – pavement markings and signage
- Street parking removed:
  - North side of York St between King Edward Ave and Cumberland St
  - North side of Beausoleil Dr between Chapel St and York St

Améliorations proposées

- Passage signalisé de l’avenue King Edward à la rue York pour les cyclistes circulant dans les deux directions
- Mesures de modération de la circulation sur la rue York à l’est de la rue Cumberland et sur la promenade Beausoleil entre la rue York et la rue Chapel
  - Dos d’âne
  - Passage surélevé à rue Nelson et rue York
  - Avancées de trottoir
- Bande cyclable dans le sens ouest
  - Rue York à l’ouest de l’avenue King Edward
  - Promenade Beausoleil à l’ouest de la rue Chapel
- Amélioration de l’intersection pour les cyclistes qui se rendent ou reviennent sur le sentier, à l’angle de la promenade Beausoleil et de la rue Chapel
- Faciliter l’orientation pour les cyclistes — Repères sur la chaussée et signalétiques
- Élimination du stationnement sur rue :
  - Côté Nord de la rue York entre l’avenue King Edward et la rue Cumberland
  - Côté Nord de la promenade Beausoleil entre la rue Chapel et la rue York

Bulb-out at Waverley Street and Cartier Street
Avancées de trottoir sur la rue Waverley et la rue Cartier



York Street Lawn & Gardens

Design Concept

York Street is a Grand Promenade linking upper and lower town. It has a beautiful, unifying paving pattern and is framed by tall arching trees. The Lawn and Gardens is a garden street with seating with expansive green lawns.

Parkette
The existing trees are maintained in a small parkette with pea gravel surface surrounded by unit paver sidewalks. Tables and chairs provide seating

Barrier Curbs
York Street has standard barrier curbs along the roadway in this area

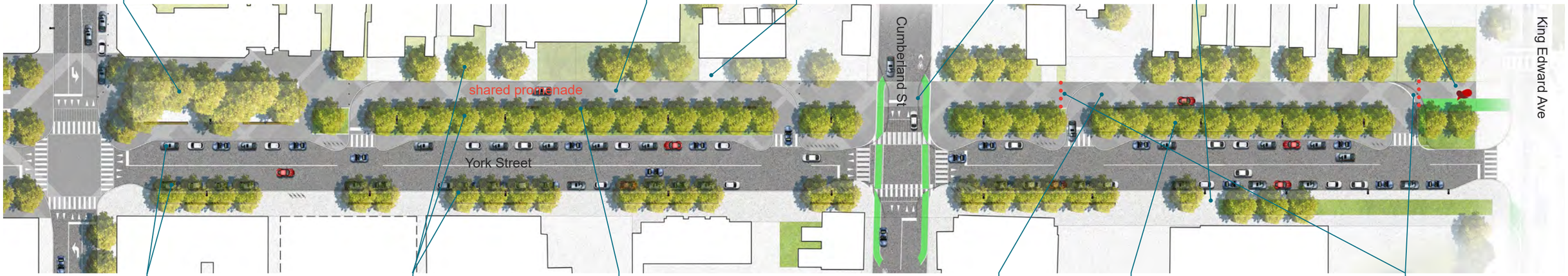
Paving
A bold interlocking paving pattern is provided along the pedestrian promenade

Lawns and Driveways
Existing driveways and lawn areas are maintained along the north side of the promenade

Cumberland Crossing
Details on the pedestrian promenade crossing of Cumberland to be determined at Detailed Design stage

Sidewalk
On the south side, the sidewalk jogs to preserve existing trees along York near King Edward

Gateway
A seating area and public art opportunity terminate the promenade at King Edward



Parking
On-street parking lines both sides of the street

Trees
Supercanopy trees line the street to create a grand scale and formality. Existing trees are maintained wherever possible

Seating
Benches are provided along the promenade

Shared Promenade
The pedestrian promenade is 6m wide and is designed to be shared with vehicles in the centre of the blocks, in order to provide vehicular access to existing properties on the north side of York. At block ends, the promenade is pedestrian only. Promenade paving is flush, there are no curb depression

Lawns
Lawns are large, long, consolidated areas that provides large soil volumes for trees

Bollards
Bollards at each end of the shared vehicular portion of the promenade define the driving area and guide vehicles to/from York Street

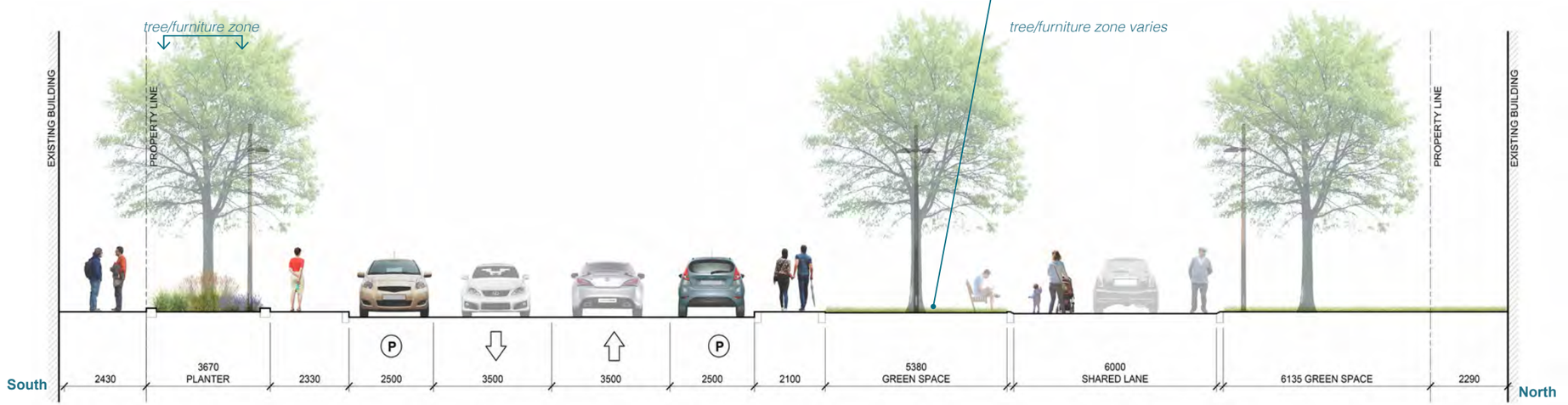
What We Heard

- be bold and creative to attract people
- pedestrian-only
- no parking
- potentially a one way street with parking
- no loss of parking
- ensure the trees will grow

Current Issues

- Angle parking along the road makes this area feel like a parking lot
- The central grass island is surrounded by roads and parking, making it more difficult to access and less desirable as public space
- More predominantly residential uses with some commercial

Typical Cross Section in the York Street Lawn and Gardens Area (looking west to Sussex)

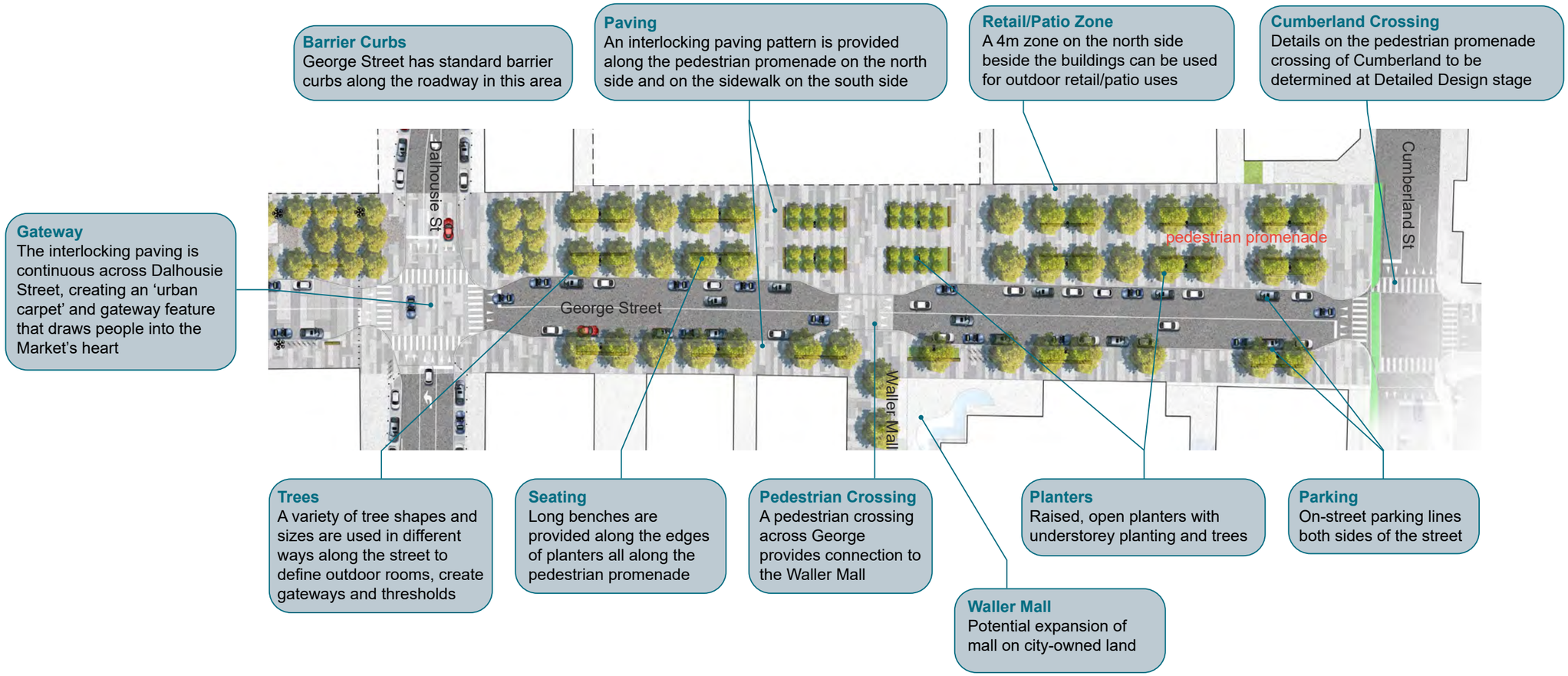


Public Realm Design | George Street Promenade & Gardens

Design Concept

George Street is a Promenade designed as a flexible public space to accommodate a variety of programming. It has dedicated areas for youth and families. The Promenade and Gardens marks a transition to a greener street and provides lots of seating.

The long term preferred concept assumes that buildings will infill what are currently parking lots on the north side of George Street.



What We Heard

- dedicate a lot of space for pedestrians
- close the street to traffic, make it all pedestrian
- one way streets
- keep the parking
- provide public art

Current Issues

- today this area is not perceived as part of the core Market area, but it has tremendous potential to infill and intensif
- some residential uses without retail at grade
- traffic/pedestrian/cyclist safety concerns - high collision rat
- opportunity to reclaim portions of city-owned land by Waller Mall (used by condominium)

Public Realm Design | Dalhousie Street

Design Concept

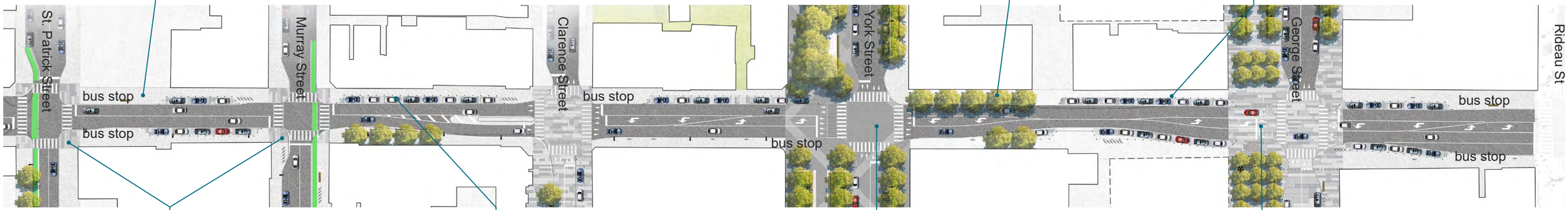
Dalhousie Street is enhanced as a neighbourhood main street with new trees and plenty of seating.

Transit Stops
Bus loading zones should be explored with OC Transpo. They are opportunities to provide amenities in the streetscape such as additional seating and shelter

Seating
Benches are provided along Dalhousie, both near intersections and in the middle of blocks

Trees
Wherever space permits, street trees are provided along the sidewalk. Trees along York and George Streets are also visible

Paving
Sidewalks are concrete. On-street parking lanes are interlock

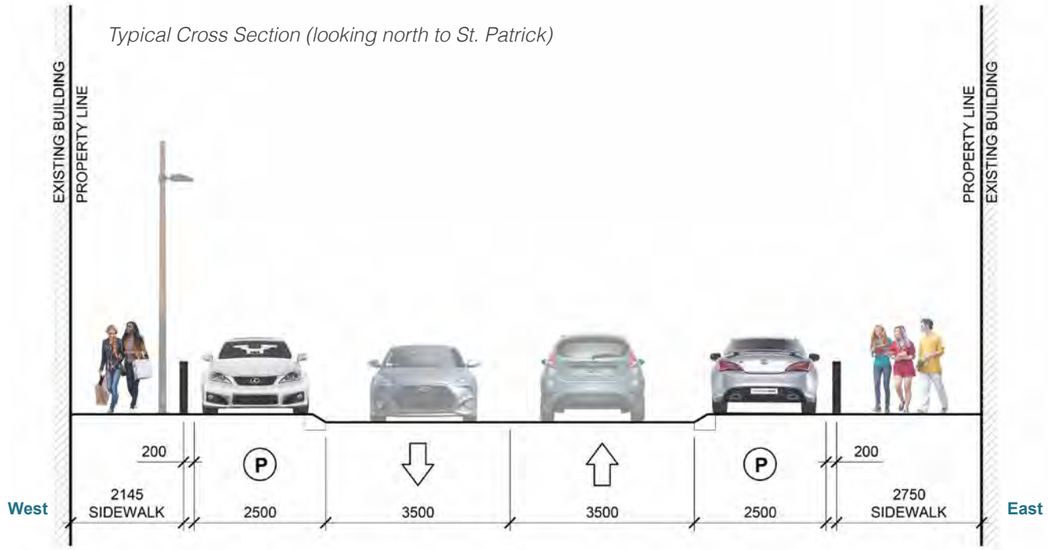


Crosswalks
Interlocking paving at the corners of St. Patrick and Murray Streets marks these intersections as part of the Market district

Curbs
The on-street parking lane has a mountable curb that separates it from the travel lanes, elevating the lane to the same level as the sidewalk. Parking spaces can be used as patios during the summer. Removable bollards separate the vehicular and pedestrian zones

Gateways
The interlocking paving treatment of Clarence, York and George Streets is continuous across Dalhousie Street, creating an 'urban carpet' and gateway features that draw people in to the Market's heart. They function as traffic calming and streetscape features along Dalhousie

Typical Cross Section (looking north to St. Patrick)



What We Heard

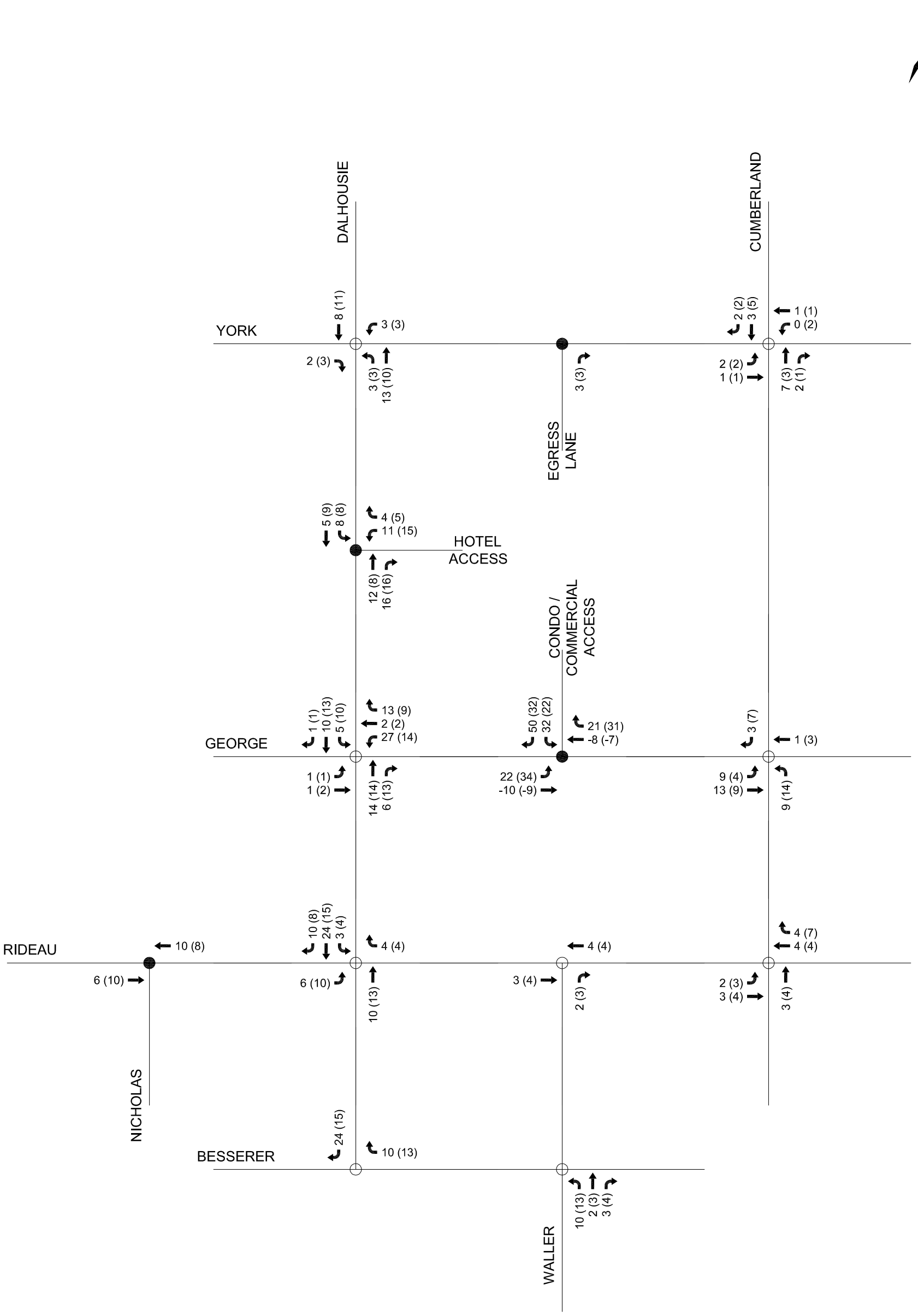
- busy and congested but works well
- consider all modes of travel
- more trees wherever they are feasible

Current Issues

- The narrow right of way works hard to accommodate travel lanes, on-street parking on both sides and sidewalks
- There are very few trees along Dalhousie
- traffic/pedestrian/cyclist safety concerns - high collision rate

APPENDIX G

Other Area Developments



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LEGEND

- Unsignalized Intersection
- Signalized Intersection
- xx VPH AM Peak Hour
- (xx) VPH PM Peak Hour

141 GEORGE STREET

2017 - 2022 TOTAL SITE TRAFFIC

DEC 2012 112142 FIGURE # 13

3. Response to City Comments

TRANSPORTATION

Comment 48a: *The City has made recent changes to Cumberland Street. There is now a southbound right-turn lane on Cumberland Street between Rideau Street and George Street.*

Response 48a: With the City's recent change to make Cumberland Street a two-way street, we have reassigned existing traffic and conducted an existing conditions level of service analysis. The new lane arrangements, reassigned traffic volumes, and level of service analysis results follow, with the SYNCHRO analysis included as Appendix A.

Figure 2: New Existing Lane Configuration

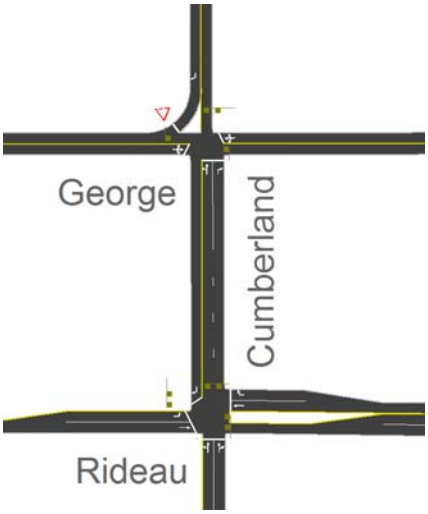

Figure 3: Existing Intersection Volumes – Assumed Volumes along Southbound Cumberland

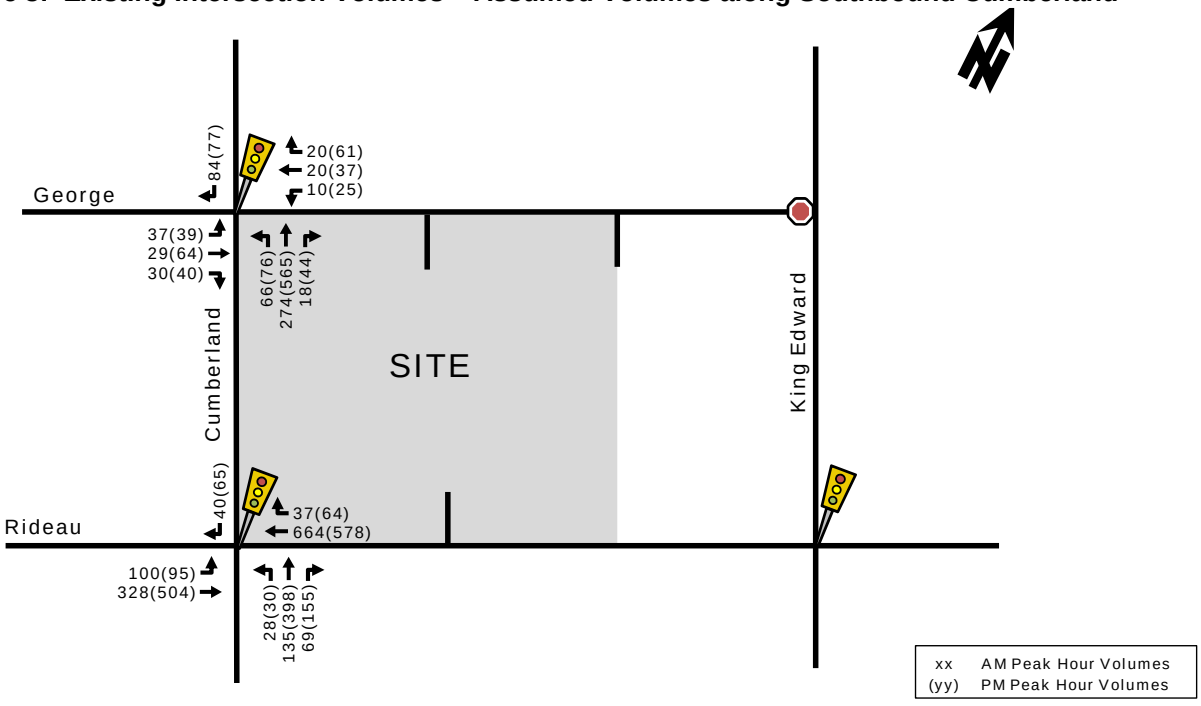

Figure 5: Total Projected Intersection Volumes (new existing plus site-generate traffic)

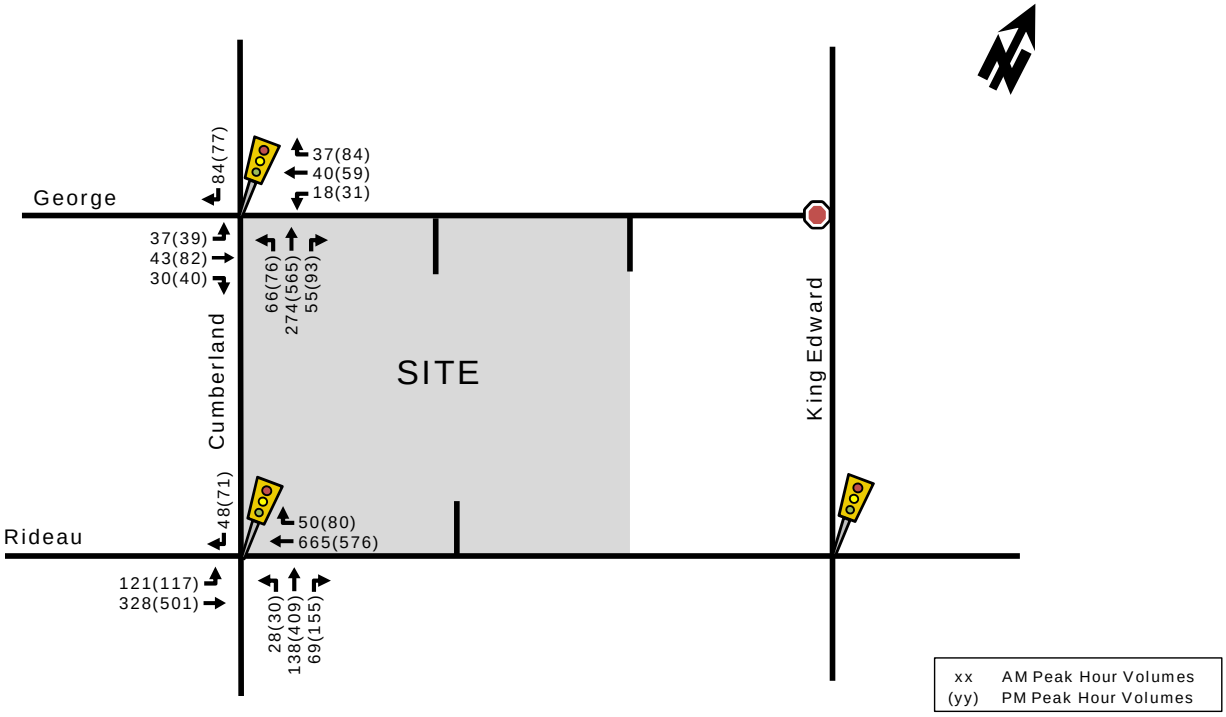

Table 3: Projected Intersection Performance (new existing plus site-generated traffic)

Intersection	Weekday AM Peak (PM Peak)					
	Critical Movement			Intersection 'as a whole'		
	LoS	max. v/c or avg. delay (s)	Movement	Delay (s)	LoS	v/c
Cumberland/George	A(B)	0.41(0.70)	EBT(EBT)	12.8(33.1)	A(B)	0.38(0.67)
Cumberland/Rideau	D(E)	0.89(0.95)	WBT(NBT)	28.4(46.9)	D(D)	0.81(0.90)
Note: Analysis of signalized intersections assumes a PHF of 0.95 and a saturation flow rate of 1800 veh/h/lane.						

As can be seen in Table 3, with the lane reduction and additional traffic, the key intersections continue to operate in the LoS 'A' to LoS 'D' range for the intersections 'as a whole', and the critical northbound through movement at the Rideau/Cumberland intersection continues to operate at LoS 'E', and v/c of 0.95, which is the same as existing conditions.

Comment 49: *In the SYNCHRO files, the lane configuration for Cumberland Street does not reflect existing geometry. Please update and revise.*

Response 49: The new lane configuration for Cumberland Street is included in the revised existing and projected SYNCHRO analysis provided herein (Appendices A and B).

Comment 50: *The proposed road modifications (on-street lay-by and northbound lane removal on Cumberland Street) will require the delegated authority approval from the General Management Branch. The following information must be submitted in order to initiate the Road Modification Agreement (RMA) process and, the following must be completed prior to obtaining a building permit:*

a) A conceptual cost estimate;

April 24th, 2020

City of Ottawa
Planning and Growth Management Department
110 Laurier Avenue West, 4th Floor
Ottawa, Ontario K1P 1J1

Attention: **Mr. Wally Dubyk**
Project Manager, Infrastructure Approvals

Dear Mr. Dubyk:

Reference: **245 Rideau Street**
Traffic Impact Statement
Our File No. 113195

1.0 Introduction

A Transportation Brief, dated October 2013, and subsequent Addendum #2, dated May 2015, and Addendum #3, dated July 2015, were prepared by Delcan/Parsons in support of a Site Plan Control application for 245 Rideau Street. Addendum #4, dated May 2019, was prepared by Novatech to review impacts of a revised site plan, as well as provide Multi-Modal Level of Service analysis for the boundary roadways.

This Traffic Impact Statement has been prepared to address the transportation impacts of subsequent revisions to the previously approved site plan for 245 Rideau Street. The proposed changes to the site plan include the internal conversion of Tower A to remove 208 hotel rooms and provide an additional 167 residential units. A new mezzanine floor has been added to the previously proposed commercial unit (Metro). Tower B is consistent with the previously approved Site Plan. No changes to the previously approved underground parking ramp are proposed. A copy of the revised site plan is included in **Appendix A**.

2.0 Trip Generation

This section provides a review of the anticipated trip generation from the revised development, compared to the previously approved development.

As the Metro grocery store is on-site today, and will be replaced by a grocery store of approximately the same size, it is assumed that there is no net increase in site traffic generation associated with the grocery store component. As such, the grocery store component is not identified in either the previously approved traffic generation or the revised traffic generation.

Consistent with the previous Addendum #4, trips generated by the approved hotel have been calculated using Land Use Code 310 in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition. As part of the previously approved Transportation Brief and subsequent Addendums, traffic counts were conducted at nearby residential developments. Consistent with the previous reports, traffic generated by the proposed residential development has

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been estimated using the aforementioned survey data. Relevant excerpts from the previously approved Transportation Brief for 245 Rideau Street are included in **Appendix B**.

Trips generated by the previously approved hotel and proposed residential units, based on ITE rates (hotel) and local survey data (residential), are summarized in the following table.

Table 1: ITE (Hotel)/Local Survey (Residential) Trip Generation

Land Use	Units	AM Peak			PM Peak		
		In	Out	Total	In	Out	Total
Previously Approved Development							
Residential[1]	560	24	60	84	33	23	56
Hotel	208	65	45	110	64	61	125
Proposed Development							
Residential[1]	727	31	78	109	43	30	73
Hotel	0	-	-	-	-	-	-

1. Surveyed rates from 200 Rideau Street and 200/238 Besserer Street, conducted as part of Transportation Brief dated October 2013

Person trips generated by the residential land use have been calculated using observed modal shares based on the 2011 TRANS O-D Survey Report. Based on the TRANS report, the following modal shares were observed in the Central Area:

- 30% Auto Driver,
- 5% Auto Passenger,
- 20% Transit, and
- 45% Non-Auto Modes.

Person trips generated by the previously approved hotel were calculated using a 1.28 ITE trip to person trip adjustment factor, consistent with the City's 2017 Transportation Impact Assessment (TIA) Guidelines. Person trips generated by the previously approved hotel and revised residential units are estimated in the following table.

Table 2: Person Trip Comparison

Land Use	AM Peak			PM Peak		
	In	Out	Total	In	Out	Total
Previously Approved Development						
Residential	78	202	280	110	77	187
Hotel	83	58	141	82	78	160
Total	**161**	**260**	**421**	**192**	**155**	**347**
Proposed Development						
Residential	102	261	363	143	100	243
Hotel	-	-	-	-	-	-
Total	**102**	**261**	**363**	**143**	**100**	**243**
Difference	**-59**	**1**	**-58**	**-49**	**-55**	**-104**

Based on the foregoing, the revised development is anticipated to result in approximately 58 less person trips during the weekday AM peak hour and 104 less person trips during the weekday PM peak hour. As such, the intersection analysis presented in the previous addendums are considered a conservative representation of intersection operations following build-out.

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APPENDIX H

Transportation Demand Management

TDM-Supportive Development Design and Infrastructure Checklist:
Non-Residential Developments (office, institutional, retail or industrial)

Legend

REQUIRED	The Official Plan or Zoning By-law provides related guidance that must be followed
BASIC	The measure is generally feasible and effective, and in most cases would benefit the development and its users
BETTER	The measure could maximize support for users of sustainable modes, and optimize development performance

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	1.	**WALKING & CYCLING: ROUTES**	
	1.1	**Building location & access points**	
BASIC	1.1.1	Locate building close to the street, and do not locate parking areas between the street and building entrances	☑
BASIC	1.1.2	Locate building entrances in order to minimize walking distances to sidewalks and transit stops/stations	☑
BASIC	1.1.3	Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort	☑
	1.2	**Facilities for walking & cycling**	
REQUIRED	1.2.1	Provide convenient, direct access to stations or major stops along rapid transit routes within 600 metres; minimize walking distances from buildings to rapid transit; provide pedestrian-friendly, weather-protected (where possible) environment between rapid transit accesses and building entrances; ensure quality linkages from sidewalks through building entrances to integrated stops/stations *(see Official Plan policy 4.3.3)*	☑
REQUIRED	1.2.2	Provide safe, direct and attractive pedestrian access from public sidewalks to building entrances through such measures as: reducing distances between public sidewalks and major building entrances; providing walkways from public streets to major building entrances; within a site, providing walkways along the front of adjoining buildings, between adjacent buildings, and connecting areas where people may congregate, such as courtyards and transit stops; and providing weather protection through canopies, colonnades, and other design elements wherever possible *(see Official Plan policy 4.3.12)*	☑

	TDM-supportive design & infrastructure measures: *Non-residential developments*		Check if completed & add descriptions, explanations or plan/drawing references
REQUIRED	1.2.3	Provide sidewalks of smooth, well-drained walking surfaces of contrasting materials or treatments to differentiate pedestrian areas from vehicle areas, and provide marked pedestrian crosswalks at intersection sidewalks *(see Official Plan policy 4.3.10)*	☑
REQUIRED	1.2.4	Make sidewalks and open space areas easily accessible through features such as gradual grade transition, depressed curbs at street corners and convenient access to extra-wide parking spaces and ramps *(see Official Plan policy 4.3.10)*	☑
REQUIRED	1.2.5	Include adequately spaced inter-block/street cycling and pedestrian connections to facilitate travel by active transportation. Provide links to the existing or planned network of public sidewalks, multi-use pathways and on-road cycle routes. Where public sidewalks and multi-use pathways intersect with roads, consider providing traffic control devices to give priority to cyclists and pedestrians *(see Official Plan policy 4.3.11)*	☑
BASIC	1.2.6	Provide safe, direct and attractive walking routes from building entrances to nearby transit stops	☑
BASIC	1.2.7	Ensure that walking routes to transit stops are secure, visible, lighted, shaded and wind-protected wherever possible	☐
BASIC	1.2.8	Design roads used for access or circulation by cyclists using a target operating speed of no more than 30 km/h, or provide a separated cycling facility	☐
	1.3	**Amenities for walking & cycling**	
BASIC	1.3.1	Provide lighting, landscaping and benches along walking and cycling routes between building entrances and streets, sidewalks and trails	☐
BASIC	1.3.2	Provide wayfinding signage for site access (where required, e.g. when multiple buildings or entrances exist) and egress (where warranted, such as when directions to reach transit stops/stations, trails or other common destinations are not obvious)	☐

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	2.	**WALKING & CYCLING: END-OF-TRIP FACILITIES**	
	2.1	**Bicycle parking**	
REQUIRED	2.1.1	Provide bicycle parking in highly visible and lighted areas, sheltered from the weather wherever possible *(see Official Plan policy 4.3.6)*	☑
REQUIRED	2.1.2	Provide the number of bicycle parking spaces specified for various land uses in different parts of Ottawa; provide convenient access to main entrances or well-used areas *(see Zoning By-law Section 111)*	☑
REQUIRED	2.1.3	Ensure that bicycle parking spaces and access aisles meet minimum dimensions; that no more than 50% of spaces are vertical spaces; and that parking racks are securely anchored *(see Zoning By-law Section 111)*	☑
BASIC	2.1.4	Provide bicycle parking spaces equivalent to the expected number of commuter cyclists (assuming the cycling mode share target is met), plus the expected peak number of customer/visitor cyclists	☐
BETTER	2.1.5	Provide bicycle parking spaces equivalent to the expected number of commuter and customer/visitor cyclists, plus an additional buffer (e.g. 25 percent extra) to encourage other cyclists and ensure adequate capacity in peak cycling season	☐
	2.2	**Secure bicycle parking**	
REQUIRED	2.2.1	Where more than 50 bicycle parking spaces are provided for a single office building, locate at least 25% of spaces within a building/structure, a secure area (e.g. supervised parking lot or enclosure) or bicycle lockers *(see Zoning By-law Section 111)*	☐ - N/A
BETTER	2.2.2	Provide secure bicycle parking spaces equivalent to the expected number of commuter cyclists (assuming the cycling mode share target is met)	☐
	2.3	**Shower & change facilities**	
BASIC	2.3.1	Provide shower and change facilities for the use of active commuters	☐
BETTER	2.3.2	In addition to shower and change facilities, provide dedicated lockers, grooming stations, drying racks and laundry facilities for the use of active commuters	☐
	2.4	**Bicycle repair station**	
BETTER	2.4.1	Provide a permanent bike repair station, with commonly used tools and an air pump, adjacent to the main bicycle parking area (or secure bicycle parking area, if provided)	☐

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	3.	**TRANSIT**	
	3.1	**Customer amenities**	
BASIC	3.1.1	Provide shelters, lighting and benches at any on-site transit stops	☐
BASIC	3.1.2	Where the site abuts an off-site transit stop and insufficient space exists for a transit shelter in the public right-of-way, protect land for a shelter and/or install a shelter	☐
BETTER	3.1.3	Provide a secure and comfortable interior waiting area by integrating any on-site transit stops into the building	☐
	4.	**RIDESHARING**	
	4.1	**Pick-up & drop-off facilities**	
BASIC	4.1.1	Provide a designated area for carpool drivers (plus taxis and ride-hailing services) to drop off or pick up passengers without using fire lanes or other no-stopping zones	☑
	4.2	**Carpool parking**	
BASIC	4.2.1	Provide signed parking spaces for carpools in a priority location close to a major building entrance, sufficient in number to accommodate the mode share target for carpools	☐
BETTER	4.2.2	At large developments, provide spaces for carpools in a separate, access-controlled parking area to simplify enforcement	☐
	5.	**CARSHARING & BIKESHARING**	
	5.1	**Carshare parking spaces**	
BETTER	5.1.1	Provide carshare parking spaces in permitted non-residential zones, occupying either required or provided parking spaces *(see Zoning By-law Section 94)*	☐
	5.2	**Bikeshare station location**	
BETTER	5.2.1	Provide a designated bikeshare station area near a major building entrance, preferably lighted and sheltered with a direct walkway connection	☐

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	6.	**PARKING**	
	6.1	**Number of parking spaces**	
REQUIRED	6.1.1	Do not provide more parking than permitted by zoning, nor less than required by zoning, unless a variance is being applied for	☑
BASIC	6.1.2	Provide parking for long-term and short-term users that is consistent with mode share targets, considering the potential for visitors to use off-site public parking	☐
BASIC	6.1.3	Where a site features more than one use, provide shared parking and reduce the cumulative number of parking spaces accordingly *(see Zoning By-law Section 104)*	☐
BETTER	6.1.4	Reduce the minimum number of parking spaces required by zoning by one space for each 13 square metres of gross floor area provided as shower rooms, change rooms, locker rooms and other facilities for cyclists in conjunction with bicycle parking *(see Zoning By-law Section 111)*	☐
	6.2	**Separate long-term & short-term parking areas**	
BETTER	6.2.1	Separate short-term and long-term parking areas using signage or physical barriers, to permit access controls and simplify enforcement (i.e. to discourage employees from parking in visitor spaces, and vice versa)	☐
	7.	**OTHER**	
	7.1	**On-site amenities to minimize off-site trips**	
BETTER	7.1.1	Provide on-site amenities to minimize mid-day or mid-commute errands	☑

TDM Measures Checklist:
Non-Residential Developments (office, institutional, retail or industrial)

Legend

BASIC — The measure is generally feasible and effective, and in most cases would benefit the development and its users

BETTER — The measure could maximize support for users of sustainable modes, and optimize development performance

★ — The measure is one of the most dependably effective tools to encourage the use of sustainable modes

			TDM measures: *Non-residential developments*	Check if proposed & add descriptions
		1.	**TDM PROGRAM MANAGEMENT**	
		1.1	**Program coordinator**	
BASIC	★	1.1.1	Designate an internal coordinator, or contract with an external coordinator	☐
		1.2	**Travel surveys**	
BETTER		1.2.1	Conduct periodic surveys to identify travel-related behaviours, attitudes, challenges and solutions, and to track progress	☐
		2.	**WALKING AND CYCLING**	
		2.1	**Information on walking/cycling routes & destinations**	
BASIC		2.1.1	Display local area maps with walking/cycling access routes and key destinations at major entrances	☑
		2.2	**Bicycle skills training** *Commuter travel*	
BETTER	★	2.2.1	Offer on-site cycling courses for commuters, or subsidize off-site courses	☐
		2.3	**Valet bike parking** *Visitor travel*	
BETTER		2.3.1	Offer secure valet bike parking during public events when demand exceeds fixed supply (e.g. for festivals, concerts, games)	☐

			TDM measures: *Non-residential developments*	Check if proposed & add descriptions
		3.	**TRANSIT**	
		3.1	**Transit information**	
BASIC		3.1.1	Display relevant transit schedules and route maps at entrances	☑
BASIC		3.1.2	Provide online links to OC Transpo and STO information	☐
BETTER		3.1.3	Provide real-time arrival information display at entrances	☐
		3.2	**Transit fare incentives**	
			Commuter travel	
BETTER		3.2.1	Offer preloaded PRESTO cards to encourage commuters to use transit	☐
BETTER	★	3.2.2	Subsidize or reimburse monthly transit pass purchases by employees	☐
			Visitor travel	
BETTER		3.2.3	Arrange inclusion of same-day transit fare in price of tickets (e.g. for festivals, concerts, games)	☐
		3.3	**Enhanced public transit service**	
			Commuter travel	
BETTER		3.3.1	Contract with OC Transpo to provide enhanced transit services (e.g. for shift changes, weekends)	☐
			Visitor travel	
BETTER		3.3.2	Contract with OC Transpo to provide enhanced transit services (e.g. for festivals, concerts, games)	☐
		3.4	**Private transit service**	
			Commuter travel	
BETTER		3.4.1	Provide shuttle service when OC Transpo cannot offer sufficient quality or capacity to serve demand (e.g. for shift changes, weekends)	☐
			Visitor travel	
BETTER		3.4.2	Provide shuttle service when OC Transpo cannot offer sufficient quality or capacity to serve demand (e.g. for festivals, concerts, games)	☐

			TDM measures: *Non-residential developments*	Check if proposed & add descriptions
		4.	**RIDESHARING**	
		4.1	**Ridematching service**	
			Commuter travel	
BASIC	★	4.1.1	Provide a dedicated ridematching portal at OttawaRideMatch.com	☐
		4.2	**Carpool parking price incentives**	
			Commuter travel	
BETTER		4.2.1	Provide discounts on parking costs for registered carpools	☐
		4.3	**Vanpool service**	
			Commuter travel	
BETTER		4.3.1	Provide a vanpooling service for long-distance commuters	☐
		5.	**CARSHARING & BIKESHARING**	
		5.1	**Bikeshare stations & memberships**	
BETTER		5.1.1	Contract with provider to install on-site bikeshare station for use by commuters and visitors	☐
			Commuter travel	
BETTER		5.1.2	Provide employees with bikeshare memberships for local business travel	☐
		5.2	**Carshare vehicles & memberships**	
			Commuter travel	
BETTER		5.2.1	Contract with provider to install on-site carshare vehicles and promote their use by tenants	☐
BETTER		5.2.2	Provide employees with carshare memberships for local business travel	☐
		6.	**PARKING**	
		6.1	**Priced parking**	
			Commuter travel	
BASIC	★	6.1.1	Charge for long-term parking (daily, weekly, monthly)	☐
BASIC		6.1.2	Unbundle parking cost from lease rates at multi-tenant sites	☐
			Visitor travel	
BETTER		6.1.3	Charge for short-term parking (hourly)	☐

			TDM measures: *Non-residential developments*	Check if proposed & add descriptions
		7.	**TDM MARKETING & COMMUNICATIONS**	
		7.1	**Multimodal travel information**	
			Commuter travel	
BASIC	★	7.1.1	Provide a multimodal travel option information package to new/relocating employees and students	☐
			Visitor travel	
BETTER	★	7.1.2	Include multimodal travel option information in invitations or advertising that attract visitors or customers (e.g. for festivals, concerts, games)	☐
		7.2	**Personalized trip planning**	
			Commuter travel	
BETTER	★	7.2.1	Offer personalized trip planning to new/relocating employees	☐
		7.3	**Promotions**	
			Commuter travel	
BETTER		7.3.1	Deliver promotions and incentives to maintain awareness, build understanding, and encourage trial of sustainable modes	☐
		8.	**OTHER INCENTIVES & AMENITIES**	
		8.1	**Emergency ride home**	
			Commuter travel	
BETTER	★	8.1.1	Provide emergency ride home service to non-driving commuters	☐
		8.2	**Alternative work arrangements**	
			Commuter travel	
BASIC	★	8.2.1	Encourage flexible work hours	☐
BETTER		8.2.2	Encourage compressed workweeks	☐
BETTER	★	8.2.3	Encourage telework	☐
		8.3	**Local business travel options**	
			Commuter travel	
BASIC	★	8.3.1	Provide local business travel options that minimize the need for employees to bring a personal car to work	☐
		8.4	**Commuter incentives**	
			Commuter travel	
BETTER		8.4.1	Offer employees a taxable, mode-neutral commuting allowance	☐
		8.5	**On-site amenities**	
			Commuter travel	
BETTER		8.5.1	Provide on-site amenities/services to minimize mid-day or mid-commute errands	☑

APPENDIX I

MMLOS Analysis

Segment MMLOS Analysis

This section provides a review of the boundary streets Dalhousie Street, York Street, and George Street, using complete streets principles. The *Multi-Modal Level of Service (MMLOS) Guidelines*, produced by IBI Group in October 2015, were used to evaluate the levels of service for each alternative mode of transportation on the boundary streets. Evaluation of the boundary streets is based on existing conditions, and are based on the targets for roadways within 600m of a rapid transit station/within the Central Area.

Exhibit 4 of the *MMLOS Guidelines* and Table 1 of the *City's Addendum to the MMLOS Guidelines* have been used to evaluate the segment pedestrian level of service (PLOS) of the boundary streets. Exhibit 22 of the *MMLOS Guidelines* identifies a target PLOS A for Dalhousie Street, York Street, and George Street. The results of the segment PLOS analysis are summarized in **Table 1** and **Table 2**.

Exhibit 11 of the *MMLOS Guidelines* has been used to evaluate the segment bicycle level of service (BLOS) of the boundary streets. Exhibit 22 of the *MMLOS Guidelines* identifies a target BLOS B for York Street, and a target BLOS D for Dalhousie Street and George Street. The results of the segment BLOS analysis are summarized in **Table 3**.

Exhibit 15 of the *MMLOS Guidelines* has been used to evaluate the segment transit level of service (TLOS) of the boundary streets. The boundary streets do not have a transit route designation, and therefore do not have a target TLOS. However, Dalhousie Street has still been evaluated for TLOS, as transit service is provided on that street. The results of the segment TLOS analysis are summarized in **Table 4**.

Exhibit 20 of the *MMLOS Guidelines* has been used to evaluate the segment truck level of service (TkLOS) of the boundary streets. Exhibit 22 of the *MMLOS Guidelines* identifies a target TkLOS D for Dalhousie Street, a target TkLOS E for George Street, and no target for York Street. Dalhousie Street and George Street have been evaluated, as they are designated truck routes. The results of the segment TkLOS analysis are summarized in **Table 5**.

Table 1: PLOS Segment Analysis

Sidewalk Width	Boulevard Width	Avg. Daily Curb Lane Traffic Volume	Presence of On-Street Parking	Operating Speed[1]	PLOS
Dalhousie Street (York Street to George Street, east side)					
≥ 2.0m	0m	> 3,000 vpd	Yes	40 km/h	**B**
Dalhousie Street (York Street to George Street, west side)					
≥ 2.0m	0m	> 3,000 vpd	Yes	40 km/h	**B**
York Street (Dalhousie Street to Cumberland Street, north side)					
≥ 2.0m	0m	≤ 3,000 vpd	N/A	40 km/h	**B**
York Street (Dalhousie Street to Cumberland Street, south side)					
≥ 2.0m	> 2.0m	≤ 3,000 vpd	N/A	40 km/h	A

1. Operating speed is assumed to equal posted speed limit

Table 2: PLOS Crowding Analysis

Effective Sidewalk Width	Approximate Platoon Flow	PLOS
Dalhousie Street (York Street to George Street, east side)		
3.0m	< 250 ped/h	A
Dalhousie Street (York Street to George Street, west side)		
3.0m	< 500 ped/h	**B**
York Street (Dalhousie Street to Cumberland Street, north side)		
2.0m	< 250 ped/h	**B**
York Street (Dalhousie Street to Cumberland Street, south side)		
2.5m	< 250 ped/h	**B**

Table 3: BLOS Segment Analysis

Road Class	Route Type	Bikeway Type	Travel Lanes	Operating Speed	BLOS
Dalhousie Street (York Street to George Street)					
Collector	No Class	Mixed Traffic	2	40 km/h	A
York Street (Dalhousie Street to Cumberland Street)					
Local	Local Route	Mixed Traffic	2	40 km/h	A

Table 4: TLOS Segment Analysis

Facility Type	Exposure to Congestion Delay, Friction, and Incidents			TLOS
	Congestion	Friction	Incident Potential	
Dalhousie Street (York Street to George Street)				
Mixed Traffic – Moderate Parking/Driveway Friction	Yes	Medium	Medium	E

Table 5: TkLOS Segment Analysis

Curb Lane Width	Number of Travel Lanes Per Direction	TkLOS
Dalhousie Street (York Street to George Street)		
≥ 3.7m	1	B